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*Mr. Borden*

# ROYAL COMMISSION

ON

# ENERGY

## HEARINGS

HELD AT

## CALGARY,

## ALTA.

VOLUME No.:

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### C O R R I G E N D A

In Volume 31, page 4360, lines 12 and 13,  
the words "...for the financing of the  
Dominion railway or conceived railway lines"  
should read "...for the convenience of the  
Dominion railway or connected railway lines".

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In Volume 31, page 4416, line 21,  
the word "hyperbolic" should read "parabolic".

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ANGUS, STONEHOUSE & CO. LTD.  
TORONTO, ONTARIO

# ROYAL COMMISSION

ON

ENERGY

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Hearings held at Calgary,  
commencing Tuesday, April  
29, 1958, at 10.00 a.m.

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## PRESENT:

Mr. H. Borden, C.M.G., Q.C.	-- Chairman
Mr. J.L. Levesque	-- Member
Mr. G.E. Britnell	-- Member
Dr. R.D. Howland	-- Member
Mr. L.J. Ladner, Q.C.	-- Member
Dr. R.M. Hardy	-- Member

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## COMMISSION COUNSEL:

Mr. A.S. Pattillo, Q.C.	
Mr. Miles H. Patterson.	
Mr. J.F. Parkinson	-- Secretary to the Commission.
Major N. Lafrance	-- Assistant Secretary to the Commission.







ANGUS, STONEHOUSE & CO. LTD.  
TORONTO, ONTARIO

(i)

APPEARANCES:

Representing Interprovincial Pipe Line Company:

Mr. T.S. Johnston	- President
Mr. R.H. Clute	- Chief Engineer
Mr. D.L. Mathieson	- Solicitor
Mr. H. Lem Stevens Guille	- Western Division Manager
Mr. D.G. Waldon	- Treasurer
Mr. F.E. Warterfield	- President, Pipe Line Consultants, Dallas, Texas.
Mr. J.H. Ratcliffe	- President, McLeod, Young, Weir & Co. Ltd., Toronto

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APPEARANCES:

Representing Shell Oil Company of Canada, Limited:

Mr. W.M.V. Ash	- President
Mr. R.P. Ritchie	- Vice-president in charge of Transportation and Supplies
Mr. J.A. Ross	Vice-president and Trea- surer.
Mr. P.L. Kartzke	Vice-president in Charge of Exploration and Discovery

EXHIBITS

<u>No.</u>	<u>Description</u>	<u>Page</u>
CC-2-1	Submission of Shell Oil Company of Canada, Limited	4450









Friday,  
May 2, 1958.

---On resuming at 10.00 a.m.

---Mr. Commissioner Ladner was not present.

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearing.

Mr. Pattillo, I believe we have a wise man from the East this morning.

MR. PATTILLO: We have got a lot of them. I don't know which one you are referring to, but I understand Mr. Mathieson is going to ask Mr. Ratcliffe some preliminary questions.

MR. MATHIESON: Mr. Chairman, Mr. Ratcliffe's name is already on the list of witnesses in the appearances.

THE CHAIRMAN: As an expert, I take it.

MR. MATHIESON: We have asked him to attend for the purposes of providing the Commission with the benefit of his opinion about the financial possibility of constructing a pipeline to serve the Montreal market, and I would like to ask him two or three introductory questions.

Mr. Ratcliffe, you are the President of McLeod, Young, Weir and Company Limited?

MR. RATCLIFFE: I am.

MR. MATHIESON: What business does your firm carry on?

MR. RATCLIFFE: The business of an investment







dealer.

MR. MATHIESON: How long have you been associated with that business?

MR. RATCLIFFE: Since 1921, when the firm was formed.

MR. MATHIESON: And I believe you have had some experience with the financing of various pipeline projects?

MR. RATCLIFFE: We have. Our firm has been associated with the financing of Interprovincial Pipe, Trans Mountain Pipe Line and Trans-Canada.

MR. MATHIESON: Have you discussed, with representatives of Interprovincial, the feasibility of financing the construction of a pipeline extension to Montreal?

MR. RATCLIFFE: I have.

MR. MATHIESON: And have you come to any conclusion as to whether the construction of such a pipeline is feasible, from the financial point of view?

MR. RATCLIFFE: It is definitely feasible, so long as there is a guaranteed throughput from the refineries who will be the users of the oil.

MR. MATHIESON: Those are all the questions I have to ask of Mr. Ratcliffe, Mr. Chairman.

MR. PATTILLO: When you speak of a guaranteed throughput from the refiners, have you







reached any conclusion as to what quantum of throughput would have to be guaranteed to make the line one that could be financed?

MR. RATCLIFFE: I have, and my estimate is that the guaranteed throughput would have to be a minimum of 150,000 barrels a day.

MR. PATTILLO: In reaching that conclusion, Mr. Ratcliffe, are you talking about an extension of the line from the present terminus at Port Credit, to Montreal, or are you talking about any take-off at any point of the present Interprovincial line running to Montreal?

MR. RATCLIFFE: There might be take-offs but we are envisaging a line which would be 26-inch capacity and would have to be built, therefore, all the way back, using some of the facilities that Interprovincial now have where they have surplus capacity.

MR. PATTILLO: Mr. Ratcliffe, can you give us any estimate as to the length of time that would be required to arrange the financing to have the necessary documents prepared and everything completed so that you could have the first take-down of moneys?

MR. RATCLIFFE: Are you talking now, sir, about the necessary appearances before the various commissions and the Transport Board, or just on the straight financial aspect of it?







MR. PATTILLO: I am talking, first, on the straight financial aspect of it.

MR. RATCLIFFE: The straight financial aspect, if there was nothing else involved and everything else was clear, including throughput agreements, I should think that should not take more than three to six months.

MR. PATTILLO: I assume that, from what you have said, as a condition precedent to even attempt to arrange the financing that the throughput agreements would have to be prepared and executed?

MR. RATCLIFFE: Definitely, they would have to be long-term throughput agreements.

MR. PATTILLO: When you are talking about long-term throughput agreements, what length of time are you contemplating?

MR. RATCLIFFE: The length of the first mortgage bonds, which would probably be a minimum of twenty years.

MR. PATTILLO: The only other question I would like to ask Mr. Ratcliffe is: from your experience in connection with these other pipelines, what would you estimate would be the period of time required from the moment that the venture was decided upon until the contractors could go upon the ground, having regard to past experience.

MR. RATCLIFFE: That is very, very difficult to answer and, in these other pipelines







with which we have been associated, as much as five years with Trans-Canada; but in the other two I would think it was about, from memory, one year or a little more, probably.

MR. PATTILLO: That is all I wish to ask Mr. Ratcliffe, Mr. Chairman.

THE CHAIRMAN: Mr. Ratcliffe, I assume you are familiar with the estimates of the cost of construction of the various alternatives that Interprovincial has given to the Commission, are you?

MR. RATCLIFFE: I am familiar with the costs which Interprovincial have given for the three alternatives.

THE CHAIRMAN: Have you worked out in your mind the manner in which the financing would be set up, that is, what proportion of bonds, whether you would have debentures? Would you have convertible debentures, for instance?

MR. RATCLIFFE: Yes. It would depend on market conditions at the time of the issue but, in the main, it would probably be approximately, say, 75% first mortgage bonds and a considerable portion of the balance in debentures; some common.

THE CHAIRMAN: Would you anticipate that all of the financing could be done in Canada?

MR. RATCLIFFE: No, I wouldn't. I would anticipate that all the equitable financing could







be done in Canada and that there would be a demand for a considerable number of the first mortgage bonds, but not all of them.

THE CHAIRMAN: Have you any idea as to what proportion?

MR. RATCLIFFE: That would depend on the disparity in rates between the US market and the Canadian market at the time of the issue.

THE CHAIRMAN: You mean the disparity in interest rates or in the value of the dollar?

MR. RATCLIFFE: The disparity in interest rates.

THE CHAIRMAN: Would you think that more than 10% of the first mortgage bonds, in principal amount, would be placed in Canada?

MR. RATCLIFFE: I would say that you would probably be able to sell the -- in the case of Trans-Canada, we sold approximately \$33 million in Canada, first mortgage bonds.

THE CHAIRMAN: \$33 million of what total?

MR. RATCLIFFE: Out of \$125 million, I think it was.

THE CHAIRMAN: Would you anticipate that the equity shareholders would be given the right to subscribe to the new equity stock?

MR. RATCLIFFE: Possibly. We have not finalized that yet.

THE CHAIRMAN: Have you any thoughts







as to where control might rest?

MR. RATCLIFFE: Well, control, at the moment, rests with Canadian shareholders and I would see no reason why that would change. In fact, I would think the degree of Canadian control would be increased rather than diminished.

THE CHAIRMAN: Would be - -

MR. RATCLIFFE: Would be enhanced rather than diminished.

THE CHAIRMAN: Well, surely, only if the new quota were given to the existing shareholders prorated.

MR. RATCLIFFE: If that were done, there would be no change.

THE CHAIRMAN: Otherwise there might very well be a change?

MR. RATCLIFFE: We would envisage Canadians getting the offer of all of it.

THE CHAIRMAN: Have you envisaged the formation of a voting trust? Would you think such a trust desirable?

MR. RATCLIFFE: I don't think so.

THE CHAIRMAN: Would you feel that control should be ensured to Canada for such a development?

MR. RATCLIFFE: I feel that, but I don't see that it should be done by a voting trust.

THE CHAIRMAN: What way do you think might be a better way?





MR. RATCLIFFE: I think, normally, shareholders prefer to hold their own shares.

THE CHAIRMAN: That may be true, but it might not have the same result in the end.

MR. RATCLIFFE: Right. I wouldn't say that the formation of a voting trust would be an insuperable obstacle to financing, but I would think it would be more easily accomplished without it.

THE CHAIRMAN: You would not think the imposition of a voting trust would deter or make the financing impossible?

MR. RATCLIFFE: Oh, no.

THE CHAIRMAN: And yet you would concede that it might be desirable?

MR. RATCLIFFE: I merely say that, generally speaking, there is a better market for shares which carry voting rights.

THE CHAIRMAN: Thank you. Mr. Frawley.

MR. FRAWLEY: Mr. Ratcliffe, you said that you would think that there would be no greater United States control over the new pipeline than there is of the present pipeline of Interprovincial?

MR. RATCLIFFE: I would think not.

MR. FRAWLEY: At the moment there is a 23% of Interprovincial controlled by the Standard Oil Company of New Jersey, and would you think there should be no greater United States control







over the company?

MR. RATCLIFFE: That is through Imperial's holdings of the common.

MR. FRAWLEY: Yes, but I am just taking what the Standard Oil Company of New Jersey says, itself, about it.

MR. RATCLIFFE: Sure.

MR. FRAWLEY: And then there is 7.12% control of Interprovincial by British-American, and there is nothing on the record as to the extent that British-American is controlled by Gulf Oil Corporation, but to the extent that there is some control there that would have to be added to the 23% -- and I will not suggest that that might be -- but that figure is something a little more than 23%, and you would say, as a result of Interprovincial financing a pipeline to Montreal, there should be no greater United States control than that something more than 23%?

MR. RATCLIFFE: Correct.

MR. FRAWLEY: Now, Mr. Ratcliffe, are you aware of the figure of refinery runs in the Montreal market, in 1957, for instance?

MR. RATCLIFFE: Not on refinery runs. I am aware of refinery capacity.

MR. FRAWLEY: What is the refinery capacity?

MR. RATCLIFFE: About 250,000 barrels a day.







MR. FRAWLEY: That is the figure I have. So what you are suggesting is that the throughput agreement which you think would be necessary to finance the proposed pipeline would be in the order of 60% of the refining capacity?

MR. RATCLIFFE: That is correct.

MR. FRAWLEY: And there would be no interference with the remaining 40% that is now supplied by foreign oil. That is as you envisage it, at the moment?

MR. RATCLIFFE: Yes.

MR. FRAWLEY: You said the time required would be one year, and I must apologize, but I have not got that one year figure. That runs from what time to what time, in your opinion?

MR. RATCLIFFE: The throughput figure?

MR. FRAWLEY: No; the one year time required to get, as Mr. Coates used to say, to get the show on the road. What is that time?

MR. RATCLIFFE: Well, I suppose we could start talking from today.

MR. FRAWLEY: If approval were granted, and when you say "approval" you mean approval by the Board of Transport Commissioners --

MR. RATCLIFFE: Yes.

MR. FRAWLEY: --from that time . . .

MR. RATCLIFFE: No, no. I am envisaging starting today to get that approval and to arrange





the necessary legal formalities and sale of securities and everything else, that that could possibly be done, if there was no delay, no unusual delay in obtaining a franchise from the Board of Transport Commissioners.

MR. FRAWLEY: So one year would elapse and how much would have to be added to that for the actual construction, or is the construction included in that one year?

MR. RATCLIFFE I am not an expert on construction, but in view of what has taken place in the building of the other lines I would suggest this would probably be a two-year matter.

MR. FRAWLEY: So it would be a year from now until the contractors would be ready to go on the land, and then another year to build the pipeline?

MR. RATCLIFFE: No, two years.

MR. PATILLO: No, two years.

THE CHAIRMAN: Two years.

MR. FRAWLEY: So it could be three years from today?

MR. RATCLIFFE: I would be afraid so.

MR. FRAWLEY: I just want to say this: financing of pipelines has been a pretty successful thing, hasn't it, recently, in Canada?

MR. RATCLIFFE: Yes, it has.

MR. FRAWLEY: Trans-Canada was a real







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success.

MR. RATCLIFFE: Trans-Canada was a real

success.

MR. FRAWLEY: Interprovincial was a

success.

MR. RATCLIFFE: Yes.

MR. FRAWLEY: Alberta Gas Trunk was a

success.

MR. RATCLIFFE: Yes.

MR. FRAWLEY: An extraordinary success.







MR. FRAWLEY: In fact, there is about \$60 million that was turned back, probably, just waiting to get back into something, one might say.

MR. RATCLIFFE: I do not know about that.

MR. FRAWLEY: And was Trans Mountain a success? I mean, the financing of it?

MR. RATCLIFFE: Yes, but not so successful recently.

MR. FRAWLEY: Having in mind that the sort of natural bent of the Canadian people to buy pipeline securities, you would not anticipate any great difficulty just as to that part of it?

MR. RATCLIFFE: I do not anticipate any great difficulty.

MR. PATTILLO: That is all, Mr. Ratcliffe. Mr. Johnston, I neglected to ask one question yesterday that I would like to ask now: take the location of the products pipeline from Montreal to Toronto vis-a-vis location of Interprovincial extension from Sarnia to Port Credit.

MR. JOHNSTON: Yes, Mr. Pattillo, we cross that line in two places.

MR. PATTILLO: So that if it was deemed advisable to hook up the two lines to make it one continuous line for either a temporary or long occasion, would there be any engineering difficulty in doing so?

MR. JOHNSTON: No, sir; the products line





is very close to the end of our extension from Sarnia.

MR. PATTILLO: About what period of time would you think would be required to do the necessary engineering work if a decision was reached to hook up the two?

MR. JOHNSTON: From the standpoint of Inter-provincial, it would take no time at all. I would imagine, without knowing anything of the engineering features that might be involved, I would think probably an addition of horsepower would be necessary which could possibly result in a small station being constructed at the point of connection.

MR. PATTILLO: And from your experience, in time, how long; giving an outside estimate would you say 2 months, 3 months?

MR. JOHNSTON: I would say it could be done in that time, yes, sir.

THE CHAIRMAN: I am not quite sure, Mr. Pattillo, whether you are directing your question to the movement of crude through the products line to Montreal.

MR. PATTILLO: I think that will come along later when we have the other company who own this products pipeline. I wanted to find out as to the location of the two.

THE CHAIRMAN: I thought yesterday Mr. Johnston, or one of the witnesses, made the statement to us it was not feasible or practical to move crude







in a products line or vice versa.

MR. PATTILLO: As I understand that, you cannot batch products and crude. That is what you are talking about, Mr. Johnston?

MR. JOHNSTON: Yes, I believe your question was on the possibility of running both crude and products through the same line. What I believe Mr. Pattillo has in mind would be the reverse; Trans Northern line substituting from products to a crude line. It, of course, would require engineering on the part of Trans Northern.

THE CHAIRMAN: That clears it up.

MR. COMMISSIONER HARDY: Mr. Chairman, I would like to make reference to what I think is an error in the transcript of yesterday; page 4416 in the testimony of Mr. Warterfield. He referred to the family of four curves used in rate base. The transcript reads "family of four curves hyperbolic in character". My recollection is that Mr. Warterfield called them parabolic in character. I suggest that the correction be made because of the fact if hyperbolic was used, mathematically it would not make too much difference but it might throw some question on the value of Mr. Warterfield's evidence if he actually used that word rather than parabolic.

MR. JOHNSTON: Parabolic is the correct term. We have seen his charts.

MR. COMMISSIONER HARDY: Could we then







have that correction made, Mr. Chairman?

THE CHAIRMAN: Certainly.

Thank you, very much indeed, Mr. Ratcliffe for coming to us this morning and being so helpful.

Thank you, again, Mr. Johnston, and all your colleagues for the submission you have given to the Commission and, as I said yesterday, it will be most helpful to us and you have all been most co-operative and we appreciate it.

MR. JOHNSTON: Thank you, very much, sir.

MR. PATTILLO: Mr. Chairman, perhaps we might have a couple of minutes' break in order that the Shell group may arrange themselves.

THE CHAIRMAN: We will have a five-minute break.

---A short recess.

THE CHAIRMAN: Gentlemen, we will now resume the hearing. Mr. Pattillo?

MR. PATTILLO: Thank you, Mr. Chairman. Mr. Chairman, we are now going to receive the submission of the Shell Oil Company of Canada, Limited. Their brief has been filed with the Commission and I am proposing that it be marked CC-2-1.

---EXHIBIT NO. CC-2-1: Submission of Shell Oil Company of Canada, Limited.

MR. PATTILLO: Mr. Chairman, Mr. Ash, the president of the company is here and I understand





he will introduce to the Commission the members of his group.

THE CHAIRMAN: Mr. Ash?

MR. ASH: Thank you, Mr. Chairman.

On my left is Mr. Ross, vice-president and treasurer, and next to him on my left is Mr. Ritchie, vice-president in charge of transportation of supplies. On my right is Mr. Kartzke who is in charge of exploration and discovery. Mr. Ross is a Canadian, Mr. Ritchie is a Canadian, I am a Canadian, and Mr. Kartzke is an American citizen.

May I read our submission at this point, sir?

THE CHAIRMAN: Yes, sir.

- - -







Submission of  
SHELL OIL COMPANY OF CANADA, LIMITED

APPEARANCES:

Mr. W.M.V. Ash	- President
Mr. R.P. Ritchie	- Vice-president in charge of Transportation and Supplies
Mr. J.A. Ross	- Vice-president and Treasurer.
Mr. P.L. Kartzke	- Vice-president in Charge of Exploration and Discovery

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MR. ASH: Introduction: The following submission is made to the Royal Commission on Energy by Shell Oil Company of Canada, Limited, a company incorporated under the laws of Canada. Shell Oil Company of Canada, Limited is a fully integrated oil company engaged in all phases of the oil business in Canada. Thus it is engaged in the exploration for, and production of, oil and gas, as well as refining, transportation and sale and distribution of petroleum and petroleum products, including the manufacture and sale of petrochemicals.

Shell Oil Company of Canada, Limited is owned 50 per cent by Canadian Shell Limited, an Ontario company, and 50 per cent by Shell Oil Company, a Delaware corporation. Of the stock of Shell Oil Company 65.2% is owned by Canadian Shell Limited, and the balance by the public. Shell Oil Company of





Canada, Limited is therefore owned directly and indirectly to the extent of 82 1/2 per cent by Canadian Shell Limited, a holding company which conducts no direct operations and which owns the major portion of the investments of the Shell Group of companies in the Western Hemisphere.

SECTION 1: Oil and Gas Exploration and  
Production: Shell's Position in the Industry:

Shell commenced exploration for oil and gas in Alberta in 1941 and has since that time conducted an intensive exploration and production program in Western Canada.

At the present time our Company has proved reserves in Western Canada of 93 million barrels of crude oil, which is approximately 3 per cent of total proved crude oil reserves, as calculated by the Canadian Petroleum Association. Our 1957 production of crude oil, amounting to 4.7 million barrels, was 2.6 per cent of total Western Canada production.

Our position in respect to reserves and production of natural gas is, however, of a different order. Total production of saleable gas in Alberta during 1957 was 136 billion cubic feet. Of this, our Company sold 17.6 billion cubic feet, or 13 per cent. Our proved reserves of natural gas in Alberta at the end of 1957 totalled 1.2 trillion cubic feet, or approximately 7 per cent of total proved reserves in Alberta as estimated by the Canadian







Petroleum Association.

We have observed with interest the proceedings of your Commission. There seem to be few areas of the exploration and production phase of the oil and gas industry that have not been discussed. We have had some difficulty in deciding what aspects of our operations or of the problems of the exploration and production phase of the industry would be of interest and benefit to your Commission.

We do not wish to impose upon the Commission by submitting information which may have already been adequately presented. It has occurred to us that we might make some useful contribution to your consideration of problems relating to oil and natural gas by discussing the extent to which we would expect hydrocarbons will be found in Western Canada and then some of the matters relative to the finding and development of reserves of natural gas.

## II. HYDROCARBON -- GENERATING CAPABILITY OF THE WESTERN CANADA SEDIMENTARY BASIN:

(1) Introduction: We would like to discuss, in the first instance, our ideas on how much oil and gas could have been generated in the Western Canada sedimentary basin.

In a later section we shall make an estimate of the possible recoverable reserves of oil and gas which may be available to us in the basin. This amount is, of course, only a part of the total oil





generated.

Any such calculations must start with an estimate of the volume of sedimentary rocks in the basin.

(2) Calculation of Volume of Sediment:

Basically, this is a simple problem in geometry. The factors which cause one estimate to differ from another are:

(i) Estimation of depth of basement in areas where no boreholes have penetrated the full sedimentary column.

(ii) Assessment of what areas to include in regions which are unexplored. In parts of the Cordillera and in parts of the Yukon and North-west Territories, the rocks have been subjected to much heat and pressure that we believe any oil in them would have been driven out. There is some difference of opinion, however, as to where the boundary between normal and altered sediments should be drawn. We have decided which areas to include in our calculations on the basis of a reconnaissance examination of these rocks.

(iii) Arbitrary limitation of basin volumes by eliminating the basin margin or all rocks below a certain depth. We have imposed no such limitation because

(a) the basin margins make up a negligible







volume, and

(b) technological advances constantly lower the depth to which drilling operations may be conducted.

The extent of the Western Canada sedimentary basin is shown on Exhibit 1. The commonest method of calculating sedimentary volume is to divide the surface of the basin into measured areas of constant average thickness and multiply out. This is the method we have employed in the Northwest Territories. (See Exhibit 2 of the original brief). But, in the Plains, we varied this method to give an independent check on the published Canadian Petroleum Association figures by dividing the area into three parallel strips, through which ran the 50th, 54th and 58th parallels of latitude. A geologic profile was constructed along each of these parallels and its cross-sectional area calculated. (See Exhibit 3 of the original brief.) The volume was found by multiplying the cross-sectional area by the width of the strip.

The results of our calculations are summarized in Table I. The total sedimentary volume for the normal sediments of the Western Canada Sedimentary Basin is figured at just over one million cubic miles. Our estimates are rather higher than those submitted to the Commission by other witnesses but this is chiefly due to the inclusion of wider areas of the relatively unexplored northern territories.





Table I

<u>Area</u>	<u>Volume of Sedi- ments in Cubic Miles</u>
Manitoba and Saskatchewan plains .....	169,800
Alberta and British Columbia plains...	404,000
Alberta folded belt .....	47,500
British Columbia folded belt .....	54,000
Northwest Territories .....	242,600
Yukon .....	142,100
	<hr/>
Total .....	1,060,000

(3) Calculation of Oil Generating Capability:

In round figures then, we have one million cubic miles of sediment. Our next task is to find its oil-generating capability. Our calculations of this factor were based on a study of the published work of John M. Hunt and George W. Jamieson ("Oil and Organic Matter in Source Rocks of Petroleum", Bulletin of the American Association of Petroleum Geologists, Vol. 40, No. 3 (March, 1956), pp. 477-488.) of the Carter Research Laboratory. Hunt and Jamieson took as a case history the Frontier formation in the Powder River basin of Wyoming. The authors write "It is fairly uniform in thickness, and contains about 900 feet of shale and about 200 feet of sand in the form of sand lenses distributed throughout the formation. Since the sand bodies are completely surrounded by shale, it is probable that the oil in







the Wall Creek sands is Frontier in origin. The particular area studies . . . comprised about 800 square miles, including all the major Frontier oil pools in this basin".

The above data show that there is about 460 million acre-feet of Frontier shale present in the Powder River basin.

They calculate the hydrocarbons in the sands within the Frontier formation. "This figure not only includes the oil in the pools, but also an estimate of oil in the sands between the pools, which is unlikely to be much more than one billion barrels. The total of all this reservoired hydrocarbon is about 2 1/2 billion barrels . . ." This figure refers, of course, to oil in place, not to recoverable oil.

By dividing this oil volume by the volume of shale, we can see that each acre-foot of shale has fed an average of just over 5 barrels of oil into the Frontier sandstone reservoir.

These authors also chemically analyzed Frontier shale and a number of other shales of different types to find out how much hydrocarbon was still left in the shale. Analysis of the Frontier gave a residual oil content of 6.4 barrels per acre-foot; some of the other shales yielded more, and others less, oil per unit volume.

We believe that the amount of residual oil in a shale is a pretty fair indication of its oil-





generating capability and, thus, under equivalent conditions of temperature, pressure and time, of the relative volume of oil that it has given up to the reservoir.

In Hunt and Jamieson's study of the Frontier, the ratio of reservoir oil to residual oil was 5.42:6.4 or 0.85:1. We have assumed for the purposes of this study that this ratio applies to all shales which have not been subjected to abnormal compressive stress.

In order to extend this study to Western Canada, we had to match our formations as closely as possible to the formations which Hunt and Jamieson had analyzed.

The Colorado shales of the Canadian Upper Cretaceous are of the same age and rock type as the Frontier and may be assumed to have similar oil-generating capability. The Mississippian Banff formation of Canada was, fortunately, one of the formations which the authors analyzed. For the other formations in Canada, we chose the nearest analogue we could find in Hunt and Jamieson's work based on our knowledge of the rock types. In the first column of Table II are the main oil-generating formations which we used in our study; in the second column are the analogues which we chose from the work of Hunt and Jamieson; in the third column are these authors' analyses of residual hydrocarbon; and in the last column is our estimate of the oil these sediments







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have given up to the reservoir -- arrived at by  
multiplying column 3 by the factor of 0.85 discussed  
earlier.





Table II

Source Formation	Analogue	Bbls/Acre-Ft. of Hydrocarbon	
		Remaining in Source Rock	In Reservoir
Lea Park-Colorado.....	Frontier	6.4	5.42
Fernie.....	Springer (Black)	8.0	6.77
Banff.....	Banff	22.0	18.63
Upper Woodbend.....	Beekmantown	1.2	1.02
Lower Woodbend - Beaverhill Lake.....	Phosphoria	11.0	9.31
Cambrian.....	Beekmantown	1.2	1.02

Ideally, one should next calculate the volume of each type of shale over the entire sedimentary basin. But our knowledge is not yet sufficient for this, nor would the amount of labour involved be justified by the expected gain in accuracy.

What we have done is to make a detailed study of a sample block of sediment located in the geographic center of Alberta (we disregarded all shales buried under less than 3,000 feet of overburden because the oil may not have been expressed from these). The results of this study were then averaged over the whole basin. The block comprised a volume of sediment equal to about one percent of the total volume in the basin. The rocks in it are probably a fair sample of the rocks in the whole basin, being richer in source-rock possibilities than those of Saskatchewan but perhaps poorer than those of the MacKenzie Basin in the Northwest Territories.







Our calculations for the oil generated in the sample block are shown in Table III. We estimate that the shales in this block may have given up nearly 40 billion barrels of oil to the associated reservoirs.

Table III

Calculation of oil generated in sample block

Area 3,960 square miles

Average sedimentary thickness 11,162 feet - 2.114 miles

Sedimentary volume 8,371 cubic miles

Source Formation	Thickness	Acre-Feet
Lea Park.....	900	2,280,960,000
Fernie.....	100	253,440,000
Banff.....	330	836,352,000
Upper Woodbend.....	600	1,520,640,000
Lower Woodbend - Beaverhill Lake	300	760,320,000
Cambrian.....	200	506,880,000

Source Formation	Reservoir Oil per Acre-Foot	Reservoir Oil in Millions of Barrels
Lea Park.....	5.42	12,363
Fernie.....	6.77	1,715
Banff.....	18.63	15,581
Upper Woodbend.....	1.02	1,551
Lower Woodbend - Beaverhill Lake..	9.31	7,079
Cambrian.... . . . .	1.02	517
Total		38,806

Finally, assuming that our sample block is a fair sample of the Western Canada sedimentary basin





as a whole, we conclude that all the sediments in the basin should together be capable of delivering  $4\frac{1}{2}$  trillion barrels of oil into the associated reservoirs.

#### Table IV

Calculation of oil in Western Canada Sedimentary Basin by extra-polating from sample block

Total volume of sediments (rounded figure).....1,000,000 cubic miles

Volume of sediments in sample block 8,371 cubic miles

Volume of reservoir oil generated in sample block..... 38,806 million barrels

Volume of reservoir oil generated in total basin

$$\frac{1,000,000 \times 38,806}{8,371} = 4,636 \text{ billion barrels}$$

III. Possible Recoverable Reserves of the Western Canadian Basin: The foregoing approach has attempted to demonstrate by geo-chemical reasoning, how much oil has been generated in the Western Canadian sedimentary basin. We would now like to show on the basis of analogy with a neighbouring sedimentary area, how much of this oil might be found and recovered by the oil industry.

Some idea as to the quantity of undiscovered reserves may be gained by an understanding of the geological conditions which control their occurrence. In areas of similar geological history, the unexplored regions may reasonably be expected to contain an





amount of petroleum per unit volume of sediments comparable to what has been found in the sediments of the explored regions.

We observe that the Western Canadian sedimentary basin is a northwesterly extension of the Interior Plains of the United States with similar rock formations and geological history. The United States portion of this vast area has been densely explored and a substantial portion of the possible ultimate has been discovered.

The proved virgin reserves (virgin reserves are defined as the sum of cumulative production and proved recoverable reserves) of the United States are estimated by the American Petroleum Institute to be 94 billion barrels as of January 1, 1958. The volume of effective sediments of the United States has been calculated by L. G. Weeks (A. A. P. G. Bulletin, Vol. 34, No. 10) and others to be two million cubic miles. The proved oil reserves per cubic mile of sediments are, therefore, 47,000 barrels. Applying this factor to the one million cubic miles of sediments we estimate to be in Western Canada, gives us a possible ultimate recovery of approximately 50 billion barrels.

Up to the end of 1957, the industry has found in Western Canada more than 6,000 cubic feet of gas for every barrel of crude oil. We have reason to believe that this ratio will increase in the future







with increasing direct exploration for gas (e.g. in the United States the ratio increased from 4,700 cubic feet per barrel of oil in 1950 to an average of about 8,000 cubic feet per barrel of oil for the last 3 years). Applying the low ratio of 6,000 cubic feet per barrel, Western Canada's ultimate gas reserves would be 300 trillion cubic feet.

We thus endorse the estimates of the Canadian Petroleum Association. However, we have based our estimates on the already proved reserves of the United States and as exploration continues, further large additions to reserves may be expected to be found there. Therefore, we should stress that we regard our estimates for Western Canada as minimum values.

Our estimate of 50 billion barrels plus that of the Athabasca reserves of 200 billion barrels, is apparently only 5 per cent of the generative capability of the basin. These figures give us a feeling of confidence that our reserve estimates are well within the right order of magnitude.

IV. Shell's Comments on Conservation Board Gas Reserve Estimates: We list below a comparison of the Conservation Board's estimate and Shell's estimates of our own gas reserves. Since Shell's reserves, as such, are not given by the Conservation Board we have taken the liberty of assessing our share of the reserves from the individual field totals. The





Conservation Board estimates are believed to be roughly equivalent to proved reserves (calculated by American Gas Association Rules) plus 50% of the probable reserves and we have used the same weighting for our own estimates.

Table V

Shell's Non-Associated Gas Reserves

Proved plus 50% Probable)

Field	Conser- vation Board Field Total Estimate	Shell's Per- centage of Field Total	Shell's Reserves Conserv. Board Estimate	Shell's own Estimate
Carbon	203	30%	61 Bcf	90 Bcf
Crossfield	150	70%	105	195
Homeglen- Rimbey	770	10%	77	113
Jumping Pound	518	100%	518	580
Okotoks	135	15% of 78%	16	17
Olds	60	100%	60	258
Sarcee	150	84%	126	215
Waterton	700	70%	490	590
Whitelaw	68	50%	34	34
			<hr/> 1487	<hr/> 2092

The difference between the two estimates is in the amount assigned to probable reserves. Probable reserves are reserves that have not been proved by drilling but are based on geological or geophysical data and interpretations which are not common knowledge in the industry. It has been our experience that a







prudent evaluator will always make a low estimate of probable reserves if he lacks the necessary information and we believe that the low estimates of the Conservation Board substantiate this experience. We have concluded, on the basis of fields in which Shell operates, that the Conservation Board figures are low and that, when the presently known fields in the Province have been more clearly defined by drilling, their reserves will be substantially higher than the Board now estimates.

V. Shell's Views on Growth of Gas Reserves in Foothills Belt: In Western Canada, the discovery of most of the gas reserves has been incidental to the search of oil and, hence, it is difficult to predict the increase in gas reserves if the industry put forth a concerted effort towards exploration for gas as such.

Numerous other briefs have been presented to the Commission showing the growth trend of gas reserves for the Western Canada sedimentary basin as a whole. We would like to present the results of our study of an area in which we are most active, namely the Foothills Belt of Alberta (see Exhibit 4). This belt contains 2 per cent of the total area and 4.5 per cent of the total sediments of Western Canadian basin.

Four of the nine gas discoveries made in the Foothills Belt since 1944 are presently in various





stages of field development. (Jumping Pound, Pincher Creek, Savanna Creek, Waterton). After the drilling of each discovery well, the Conservation Board credited to the discovery, the reserves underlying some 1,000 acres. This set the total reserves of the four fields at 300 billion cubic feet initially. The ultimate recovery of these fields is now carried by the Board at 3,500 billion cubic feet as a result of the development to date; therefore, it is readily apparent that development has increased the credited reserves to more than ten times the initial estimate.

The remaining five discoveries (Sarcee, Chinook Ridge, Mountain Park, Stolberg, Lovett River) are credited with reserves of 270 billion cubic feet, based on about 1,000 acres per discovery. By analogy, it is suggested that the ultimate recovery of the resulting five fields might be in excess of 2,700 billion cubic feet and, thus the ultimate recovery of all nine fields should be 6,200 billion cubic feet instead of 3,900 billion cubic feet as estimated by the Conservation Board, an increase of about 60 percent.

In the Foothills Belt of Alberta, between 1944 and the end of last year, 46 deep wildcats have been drilled resulting in the nine discoveries mentioned above. We have plotted the cumulative additions to reserves versus the cumulative number of deep wildcats on a graph (Exhibit 5) to determine if a trend can be recognized and, in this area, it would





appear that, on the average, at least 125 billion cubic feet of gas have been discovered for each wildcat drilled. In preparing the graph, we have used the Conservation Board estimate of 3,500 billion cubic feet for the four partly-developed fields but, ten times the discovery well reserves or 2,700 billion cubic feet, for the five additional discoveries.

On the basis of the number of tests already completed or drilling this year, we estimate that at least 15 wildcats will be completed during 1958. If the incentive is provided to continue even this moderate rate of drilling, we expect that at least 1,800 billion cubic feet of gas will be added to the Foothills reserves each year. The first 1958 discovery (Panther River) has already added substantial amounts.

What we have tried to show in the Foothills Belt is that the reserves discovered are proportional to the number of wildcats drilled following reasonable exploration techniques. Naturally, the number of wildcats drilled depends on incentive. It is interesting to observe that the industry, provided with the impetus of an additional market, starting deliveries, say, at the end of 1961, may well have reserves of 13,000 billion cubic feet in the Foothills Belt alone, an increase of 9,100 billion cubic feet over the present Conservation Board estimates by the time sales might start.

We wish to point out that most of the reserves







in this area have so far been found in Mississippian rocks and in structures apparent from surface geology although usually the presence of structure has been verified by geophysical means. We can see enough structures of this type alone to keep the industry busy wildcatting, at the rate we predict, through 1961. If incentive continues, we believe that many buried structures, not apparent at the surface, will be found by geophysical methods. Furthermore, our recent discovery of gas in the Devonian formation at Panther River opens up possibilities of reserves in a new zone in all structures where this formation has not been tested.

VI. Incentive for Exploration: 1. We discuss below our ideas of the incentive motivating Shell to explore for oil and gas reserves in Western Canada. We will give, firstly, a brief outline of the cash position of our exploration and production activities illustrating the incentive for exploration for oil and gas combined and, secondly, using our Jumping Pound field as an example, the incentive for gas alone.

Table VI is a cash flow statement of Shell's exploration and production activities. We have shown simply the total money spent and the income received during the period 1949-1957 and the expense and income during the year 1957.





Table VI  
Cash Flow Statement

	(Thousands of Dollars)	
	1957	Accumulative 1949-1957
Income from oil and gas after royalty	12,636	33,814
Expenditures:		
Production operations	4,158	17,997
Administration, Services, etc.	4,138	19,107
Exploration & Development Capital	26,470	164,688
	<hr/>	<hr/>
Total	34,766	201,792
Deficit	22,130	167,978

The above figures take no account of the interest cost of obtaining these moneys.

Over the past eight years, we have had to make up an average of \$20 million dollars in cash each year and have accumulated a total deficit of \$168 million. During 1957, our operating income, after production expenses, was about \$8.5 million and if we had ceased all investment at the end of 1957 it would take 20 years, at this rate of income, to pay back the deficit. In the above figures, it will be noted that nothing has been included for the cost of unreturned capital and, therefore, the 20-year payout inferred is the shortest that could possibly be considered.

Our reserves of oil at the end of 1957 were 93 million barrels which would last approximately 20







years if we could continue the 1957 production at a constant rate. Our reserves at Jumping Pound (which is the only gas field out of which we are producing any substantial amount of gas) also are sufficient to produce the field for approximately 20 years at the 1957 production rate. From the above, it is obvious then that if we could produce oil at the 1957 rate and gas from Jumping Pound at the 1957 rate for a period of 20 years, we would just get back the capital we have expended, again allowing nothing for the cost of the outstanding capital. Further, it follows that any profit we expect to make will have to come from future discoveries of oil and gas or from the sale of gas from fields already discovered but for which we have as yet no market.

We have attempted to show that Shell has risked a large capital investment in Canada and we believe from the figures given it is self evident that we have taken a very long-range view of this investment and we are prepared to accept a very slow return on our money. The fact that we are continuing to invest demonstrates that we believe we can find oil and gas reserves in Western Canada and that markets for our production will become available.

Incentive to Develop Gas Reserves: The oil and gas industry can do the drilling necessary to establish the proven reserves of gas required.





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We will try to illustrate that the industry cannot, in its good judgment, continue to make the required substantial expenditures without proper incentive and that such incentive must be greater than what is presently available to the supplier of foothills gas to the utilities of Alberta.

We have used the history of our Jumping Pound gas project as an example of how little incentive there is for gas producers under the conditions of limited markets and non-competitive prices.

The Jumping Pound field was the first non-associated gas field in Canada to be developed, the sour gas production treated in a modern plant and the residue dry gas sold to a local utility. It is one of the main sources of supply for the Canadian Western Natural Gas Company Limited for the City of Calgary and the Banff line which serves the City of Banff.

During the period from 1941-1947 Shell drilled seven wildcat wells in Southern Alberta. Of these none discovered oil and only one found gas production, the latter being Jumping Pound Unit No. 1, the discovery well in the Jumping Pound field.

Production at Jumping Pound is from the Turner Valley formation of Mississippian limestone, the wells being drilled to a depth of approximately 10,000 feet at costs exceeding \$250,000.00 each.

In 1945 the Jumping Pound Unit was formed by agreement between Shell, the Province of Alberta, freehold lessors and royalty owners. This agreement





provided for the orderly development of the field.

By 1947, four wells had been drilled, of which two were abandoned. In 1947 drilling was discontinued because there was no market for the gas, but in 1950 by reason of an increase in gas requirements in Southern Alberta, Shell was able to contract with Canadian Western Natural Gas Company Limited for the delivery of Jumping Pound gas.

Between 1950 and 1954 Shell drilled ten more wells, one of which was not commercial and was later abandoned. The drilling confirmed the existence of a complex geological structure and established the field as being some twelve miles in length and averaging about one mile in width.

A gas processing plant was completed and placed on stream in the spring of 1951 delivering sweet gas to Canadian Western. This initial plant which had a capacity of 25 million cubic feet per day was expanded in stages to 35, to 60, and finally in 1957 to 90 million cubic feet per day of merchantable gas. The contracted average daily sales volume of the plant at its present rated capacity of 90 million cubic feet per day is expected to be approximately 60 million cubic feet per day.

The contract with the utility company is for a period of ten years, commencing May, 1951, and provides for a price of 10-3/4 cents per M.C.F. at the tailgate of the plant.







The plant process includes removal of liquid hydrocarbons, hydrogen sulphide, carbon dioxide and water vapor. The liquid hydrocarbons are recovered and sold, the hydrogen sulphide is manufactured into elemental sulphur and sold, and the carbon dioxide and water are removed and vented.

The attached Exhibit 6 shows the above mentioned trend of plant development by years, indicating the difference between contracted sales volume and the plant capacity required to handle a 70 per cent load factor. With no more than the local market available at any time the plant had to be installed in this stepwise manner. This resulted in greater expense than under the normal conditions where an adequate market exists and major construction can be completed as one job.

Exhibit 7 further illustrates the effect of load factor on operations on a monthly basis with deliveries during some months being as low as 25 per cent of the plant's capacity.

These charts illustrate the effective plant capacity that must be held in readiness to meet peak demands. We stress this condition of load factor as it is most important in the economics of a plant where facilities, material and labor must always be provided for capacities well in excess of contracted average daily sales volumes.

At present the cumulative investment in the





plant and field facilities alone has reached \$12 million. The return of this investment is still many years away because of the low load factor for the reserve and the low price available in a restricted market which exists even today in the absence of any major outlet in the foothills area. The following cash flow statement illustrates the actual position of the Jumping Pound gas production and processing project under the above conditions.

Table VII

Cash Flow Statement - Jumping Pound Plant and Field  
Accumulative 1941 - 1957

	(Thousands of Dollars)	
	Including Finding Costs	Excluding Finding Costs
Income after Royalty	\$11,509	\$11,509
Expenditures:		
Production Operations	3,949	3,949
Administration, Overhead, Sundry	3,154	1,714
Exploration	4,474	-
Capital Expenditures (Development wells, plant and land)	12,239	12,239
	<hr/>	<hr/>
Total	\$23,816	\$17,902
Deficit	\$12,307	\$ 6,393
Interest on Outstanding Capital @ 5½%	\$ 7,303	\$ 3,182
Deficit including interest charges	\$19,610	\$ 9,575

On the basis of our experience to date,  
and looking into the future and assuming (1) that







the same gas prices will exist (although we hope that they will be improved), and (2) that the same costs of developing gas fields and building gas treating facilities will prevail (although we expect them to continue to go up), and (3) that we credit our outstanding capital at  $5\frac{1}{2}\%$  interest we might look at the project about like this:

Including finding costs and using the principle that the first dollar in is the last dollar out, the first dollar would be the one spent in the first wild-cat well drilled by Shell in Alberta. This dollar would not be returned until 1973, or 32 years later. But because it is difficult to allocate finding costs, let us exclude them and assume that the first dollar spent was for the discovery well at Jumping Pound. Under the conditions which have existed and which now exist, this dollar would not be paid back until 1963, or about 20 years after spending.





Knowing what we do about slow market build-up, costs and the low prices for gas, we feel that under the conditions which have existed the Jumping Pound project was a poor investment. Consequently we feel that if those conditions were to continue it would be impossible for us to recommend that substantial expenditures be incurred in the search for and development of natural gas reserves in the foothills of Western Canada.

We are confident of our ability to find substantial reserves of gas and we are presently optimistic about improved conditions for gas exploration, market volumes, load factors and prices. Should it transpire that this optimism is not justified, we would have to give serious consideration to the advisability of revising our exploration plans.

Importance of Production Rate: The importance of production rate on the economics of a plant like Jumping Pound prompts us to comment on the so-called 30-year rolling supply which has been discussed at these hearings.

We wish to point out that such a requirement is much more stringent than it may first appear. When considered along with our own and the industry's calculation of the gas prospects of Western Canada it does not help but rather serves to aggravate the poor incentive conditions summarized earlier.





Most forecasters estimate that the needs of Canada will triple in the next 30 years. It is not difficult to see that the reserves which must be set aside to take care of these needs on a 30-year rolling supply basis will represent a gas volume equivalent to 60 years supply at the initial rate. When we consider what the position will be, say, 10 years after sales start, we are certain that the requirements for the following 30 years will also be equivalent to 60 years at the then prevailing rate. In fact, at any moment the 30-year rolling supply calls for reserves equivalent to 60 years supply at the then current rate.

Furthermore, as additional fields are set aside to meet future requirements it would be reasonable to expect these fields to be connected to the transmission systems so that the operators can obtain some return. The concept of a 30-year rolling supply thus means that each field will produce over a life of 60 years. From the standpoint of the life of wells and plants and profitability, this would be completely unrealistic. We therefore suggest that the Commission consider a policy by which the life of a field would be fixed at a realistic period based on sound engineering and economic considerations.

VII. SUMMARY. Shell's views in summary might be stated as follows:







The sedimentary basin of Western Canada has had an enormous capacity for the generation of hydrocarbons.

There remain in Western Canada from this generating process, tremendous quantities of recoverable oil and gas.

The published estimates of the reserves of oil and gas are for the most part substantially lower than is justified.

The growth of reserves of natural gas depends directly on the amount of exploration which is conducted. The relative magnitude of such growth is illustrated by our experience in a section of the Foothills Belt of Alberta.

The extent of any exploration effort will depend entirely on the incentive to explore. In our own case the overall incentive present in the past has resulted in our taking a very long-range view of profitability. However, the incentive, or lack of it, to search for gas over the past years would preclude a repetition by our company of the type of operation which we have conducted at Jumping Pound. Such an operation requires much greater incentive in the type of market available. In other words a gas market is vital to the continuance of such an investment.

THE CHAIRMAN: Would you like to have a break, Mr. Ash, for a few minutes, to catch your breath? We are going into another subject.

MR. ASH: Thank you.





THE CHAIRMAN: We will have a break for ten minutes.

---A short recess.

THE CHAIRMAN: Mr. Ash, would you proceed?

MR. ASH: Yes, sir. We now turn, sir, to the question of markets and disposition of Canadian crude. We start with a brief history.

Production of crude oil in Canada increased from 20 thousand barrels daily in 1947 to 504 thousand barrels daily in 1957. The initial discoveries in Alberta displaced rail shipments of crude from as far away as Texas and Louisiana. Refinery capacities were built up in the Edmonton area and some products began to move into Saskatchewan by road and rail. By 1950 the forward potential of both production and markets was such that a group of the major oil companies formed the Interprovincial Pipe Line Company which financed and built a pipe line from the West to the head of the Great Lakes. By 1953 the oil companies were looking to the western market and another group formed the Trans Mountain Oil Pipe Line Company which financed and built a pipe line to Vancouver. Thus, by 1954 Prairie crude oil was reaching Canadian refineries from Vancouver to Sarnia (See Exhibit 8(A)). Alberta, in addition to supplying refineries in Ontario and British Columbia, also made up crude deficiencies in the other Prairie Provinces. Saskatchewan became







self-sufficient in 1956 but Manitoba is still deficient on over-all crude requirements.

Domestic Markets: Ontario is clearly becoming the largest regional consumer of Canadian crude, taking an estimated 141 thousand barrels daily last year. The three Prairie Provinces still had a slight advantage over Ontario in 1957 but this is expected to be eliminated during 1958.

Use of Canadian Crude Oil	1954	1955	1956	1957	1958 % Increase (Est.)	1958 over 1954
		(MB/D)				
Prairie Provinces..	124	142	155	148	162	30.6
Ontario.....	91	113	135	141	170	86.8

The marked increase in Ontario consumption anticipated in 1958 is due to the recently completed refinery expansions in the Toronto/Hamilton area. Exhibit 8 (B) illustrates the nature of the Ontario market for crude oil in more detail, dividing the Province into two, taking Sarnia and Fort William as the West and the Toronto/Hamilton area as the East. In 1957, Western Ontario required 116 thousand and the East 43 thousand barrels daily. Of this total, 17 thousand barrels were imported daily from the United States of America.

	1957			1958 (Est.)		
	Ontario					
	West	East	Total	West	East	Total
Canadian Crude..	99	42	141	104	66	170
Imported Crude..	<u>17</u>	<u>1</u>	<u>18</u>	<u>17</u>	<u>1</u>	<u>18</u>
Total.....	116	43	159	121	67	188

Thus Ontario consumption of Canadian crude may be expected to increase by 29 thousand barrels





daily, or 20.6 per cent during the current year. Refinery construction currently under way in the Toronto/Hamilton area will add another 20 thousand barrels daily in 1959. These refinery additions will replace immediately and directly products manufactured in Montreal from imported crudes. It would seem logical that all refiners in Ontario presently having access to Canadian crude by existing pipe lines, should nominate western oil. Such a move would add 18 thousand barrels daily to the demand for Canadian crude, raising Ontario requirements 33.3 per cent above the 1957 level.

British Columbia is the third domestic regional consumer of Canadian crude. There consumption of Canadian crude has increased from 37 thousand in 1954 to an estimated 73 thousand barrels daily in 1958 for a 97.3 per cent gain. This Province has enjoyed the most spectacular rate of development in the post-war decade. Continuing refinery construction in British Columbia is the oil industry's expression of confidence in the future of this area.

Geography of Imports: Turning to importing areas, Quebec and the Maritime Provinces are the most important. (See Exhibit 8 (B)). The Province of Quebec imported 253 thousand barrels daily of crude oil during 1957 of which 206 thousand came from Venezuela, 39 thousand from the Middle East and the remainder from the United States of America





and Trinidad. The Maritime Provinces imported 35 thousand barrels daily from Venezuela. It should be pointed out that crude imports have been of declining significance in Eastern Canada since 1950. In that year total refining capacity in Eastern Canada was 241 thousand barrels daily and crude imports 208 thousand, or 86.3 per cent. By 1957 this ratio had fallen to 60.0 per cent and in 1958 a further decline to 55.2 per cent is anticipated due to refinery expansions within the present orbit of Canadian crude oil.

Export Markets: Crude oil exports to the United States on a significant scale began in 1955 with 34 thousand barrels daily going to the Pacific North West states and 14 thousand barrels daily to points in the United States midwest (Exhibit 9 (B)). These logical markets both grew steadily through 1957 to a total of 133 thousand barrels daily. In 1956, however, Canadian producers received an unexpected bonus in the form of offshore shipments to California made possible by distortions in international oil movements brought about by the Suez crisis. At the time, it was generally accepted that these were spot or temporary movements and consequently despondency or alarm, when these shipments stopped, as they did in July 1957, was not







justified.

The emergence of Saskatchewan as a major producer of crude oil is one of the most significant developments in recent years. From 1951 to 1957 Saskatchewan production increased from 3 to 100 thousand barrels daily. Over the same period Alberta production gained from 126 to 333 thousand barrels daily or 204.0 per cent. The more rapid advance of Saskatchewan production increased its share of total western crude output from 2.3 per cent to 20.0 per cent or 770 per cent. Most recent estimates of proven crude oil reserves indicate Alberta to have 2,722 million barrels and Saskatchewan 421 million barrels.

Saskatchewan's Advantage: In spite of smaller reserves so far found, Saskatchewan has many advantages over Alberta. Geographically, the south-east corner of Saskatchewan, where the most active fields are located, is approximately 600 miles closer to Eastern Canada and United States Upper Mid-Continent markets. In terms of trunk pipe line tariff, this represents a saving of about 12 cents per barrel. Secondly, Saskatchewan producers have no over-all pro-ration. Yet still producing according to good engineering standards, and sound conservation principles, they have been able to enjoy more flexibility in moving into new market areas as production became available.





The first of these advantages would yield only to substantial discoveries in Manitoba, even closer to market. The second advantage -- no need for pro-ration -- may well remain.

The changing pattern of crude exports to the United States is a reflection of Saskatchewan development. Shipments to United States Upper Mid-Continent points reached 33 thousand barrels daily in 1957, while Alberta movements to the same area declined slightly to 17 thousand barrels daily. This seems to be a likely growth for Saskatchewan production. In 1958, the increase in crude exports to this area should largely offset the decline in volumes moved to the Pacific North West states.

Crude Exports	Thousands of Barrels Daily	
To:		
	1957	1958
		(Est.)
United States Upper Mid-Continent...	59	80
United States Pacific North West....	<u>74</u>	<u>45</u>
	<u>133</u>	<u>125</u>

Loss of Canadian Crude Market in U.S. North

West: The only export market which has in effect been lost in 1958 is the offshore movement to California, which has already been explained as a windfall situation. In the case of the Shell Oil Company refinery at Anacortes, Washington, the reduced volume of Canadian crude imports has been due to cut-backs in refinery throughputs and not to displacement by other foreign crudes. The Pacific North West states have felt the full impact of the current economic slowdown and problems







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of slackening demand and long inventories have been pronounced, leading to the current temporary reduction in crude runs.





### Saskatchewan Gain not at Expense of Alberta:

It may be seen that the Saskatchewan producers have gained at the expense of their neighbours in Alberta, but Exhibit 9(A) shows that this is not so. Saskatchewan crude is serving an area in the United States which is at present comparatively isolated from competitive sources, whereas the markets recently lost by Alberta producers are on tidewater on the West Coast and this area cannot be regarded as being exposed to competition from Saskatchewan producers. The fact is that domestic and export markets must be served from the most economic source and it is on this sound basis that Saskatchewan production has enjoyed such healthy increases over the last few years.

Now Saskatchewan crude oil has a higher than average sulphur content. Some refiners in Eastern Canada can only use this feedstock when blended with other sweeter crudes, principally from Alberta. On the other hand, certain refiners in the United States Upper Mid-Continent area have designed refinery installations specifically to handle the sour crudes from Saskatchewan fields. It would seem that once these investments had been made and the refinery economics established on the basis of the cheap, sour crude, these United States refiners should be stable importers of Saskatchewan crude at increasing levels.

Encouraging Overall Picture: This picture of the outlets for Canadian crude oil is an encouraging one.





In the Prairie Provinces the diversification and development of recent years, which has been partially generated by oil and gas activities, will continue to provide a steadily growing market for local crudes.

In Ontario, with the reach of Canadian crude stretching further eastward to Toronto and strengthening steadily, this must surely be regarded as the most promising development as western producers share the remarkable industrial prosperity of this Province. This optimism must also apply to the British Columbia market based as it is upon its wealth of natural resources.

Finally, we have the prospect of growing exports to the United States. Temporarily reduced on the West Coast and growing steadily in the heart of the continent, there can be little doubt that Canadian crude oil producers will enjoy increasing markets in these areas.

History of Crude Imports: With domestic crude production of 20 thousand barrels daily and refining capacity of 245 thousand barrels daily, imports of crude oil into Canada played a dominant role in 1946. It was not until 1950 and the Interprovincial Pipe Line that the volume of crude imports began to level off as Canadian crude began to feed the Sarnia area. (See Exhibit 10 of the original exhibit).

From 1950 till 1955 declining imports into Ontario offset increasing movements into the Maritimes and Quebec, but thereafter the total began to increase







once more in response to refinery expansions in the Montreal area. Imported crude has, however, been declining in relative significance in Eastern Canada since 1950. In that year, crude imports amounts to 86.3 per cent of refining capacity.

Future of Crude Imports: In 1958 imports are estimated to be 55.2 per cent and there is every reason to believe that this share will decline in the next few years as refining capacity in the Toronto area is increased. In 1959, when current refinery construction in this area is completed, the ratio will be reduced to 53.0 per cent. As refining capacity is enlarged in the Toronto/Hamilton area the radius of economic product distribution will push eastward, displacing Montreal refined products. This displacement will, in turn, free refining capacity in Montreal which will then be available to absorb future growth in the Quebec market without necessitating increases in capacity or crude imports. Our own company expects to build a refinery near Bronte, Ontario, in 1960. It is designed to run Canadian crude and to displace products from our Montreal East refinery currently being moved by pipeline into Southern Ontario. By so doing we will, in effect, be reducing our dependence on imported crude.

A Solution to the Problem: The Toronto/Hamilton area is one of the most rapidly developing regions in North America. Residential, commercial





and industrial expansion and population increases have all been involved. Until as recently as last year, refining capacity in this area was only 35 thousand barrels daily, running imported and domestic crude, with the balance of supply being moved by product pipelines from Montreal (60 thousand barrels daily) and Sarnia (145 thousand barrels daily). By 1959 local refining capacity in the Toronto/Hamilton area will be 110 thousand barrels daily, running entirely on Canadian crude. By 1963 the volume of domestic crude processed in this area should approach 150 thousand barrels daily. The effect will be the "backing up" of products refined in Montreal from imported crude and replacing them with products refined locally from domestic oil. Or put differently, spare refining capacity in Montreal for the future growth of that area, will be created by the construction of refinery capacity in Ontario. This is the classic way, in the natural play of supply and demand, in which markets have ever developed in a free economy.

Product Imports: Product imports into Eastern Canada have also been declining in significance since 1951 (See Exhibit 11 of original brief). At that time they amounted to 22.8 per cent of total demand for petroleum products, while the estimate for 1958 is 17.7 per cent.

These imports have consisted principally of aviation fuels and middle distillate heating oils.







The yield structure of Canadian refineries in the aggregate has been unable to provide adequate middle distillate production to cover the remarkable growth in demand of the post-war years. This rate of increase is now expected to level off as saturation points are approaching in railway dieselization, and conversion to oil heat installations. Natural gas is now available in the metropolitan centres of Eastern Canada and this will further retard the rate of increase in distillate demand.

In the case of aviation fuels the rapid growth of turbine and jet-powered aircraft is helping to reduce imports. As conventional propeller-driven aircraft requiring high octane aviation gasolines are replaced by turbine-powered types using lower cut gasolines and distillate blends, domestic refiners will be able to satisfy a larger part of the overall aviation fuel demand.

It seems unlikely, therefore, that product imports into Canada will increase significantly beyond present levels and in the near future a downward trend may be expected.

Price Structure: The basis of field prices of Canadian crudes has evolved systematically since 1957. As crude production increased in Alberta it had to move further and further to market outlets. The further the haul the lower the wellhead netback as more transportation charges had to be absorbed





by the producer. But until Canadian crude had to compete directly with some other major source, Alberta wellhead prices were isolated from external influences. When the Interprovincial Pipe Line moved Canadian production to Sarnia a substantial reduction was necessary to equate Alberta wellhead prices to competing Illinois crudes laid down at Sarnia. Thus, before the pipeline completion, Redwater wellhead price was \$2.88 per barrel, but by mid-1951 had fallen to \$2.46 per barrel. Illinois crude laid down at Sarnia became the base point upon which Canadian crude was priced. Today, with Illinois at \$3.00 and Redwater at \$2.56 they lay down at Sarnia within 1 cent per barrel of one another (Exhibit 12 of original brief). The price of moving into these new market areas has been exposure to the forces of competitive crudes. The further from the wellhead the crude is moved, the more susceptible the netback price becomes to these factors and the greater is the freight absorption necessary to make the move.

Canadian Crude in the Montreal Market: It has been suggested that Canadian crude be moved by pipeline into the Montreal area as a means of creating a market outlet for shut-in production in Alberta. In order to force the economics of this move, certain proposals have been made, all of which seem to us to be open to criticism.

Dangerous Artifices: If the pipeline





freight charge to Montreal were lowered artificially by forcing intermediate offtake points to carry a disproportionate share of line operating costs, this would mean discrimination against consumers west of Montreal. Any such system of artificial controls creates more problems and inequities than it solves. If a system of accelerated depreciation were used to assist the investment, then again every consumer in Canada being served by a pipeline not enjoying this privilege would be discriminated against.

The imposition of a customs tariff on crude imports would, of necessity, be reflected in higher product prices in the Montreal refining orbit. Refiners in the Maritimes would have to pay the same tariff, even although they could not possibly use Canadian crude -- an even sharper discrimination against the Maritimes consumer.

The concept of raising a tariff wall to keep out imports implies that the commodity in question has a limited ability to overcome the barrier. But this does not apply to foreign sources of crude oil currently being imported into Eastern Canada. All are in areas enjoying lower finding and development costs. Most are countries whose very economic existence depends upon exports of crude oil and its products. Retaliation, by price and other concessions, in order to retain their traditional hard-currency markets in Eastern Canada, cannot be excluded. The







implications in terms of revenue to provincial government and producer alike are obvious.

Quotas: It has been suggested the answer to this is a system of quotas. A quota system similar to that currently being administered in the United States would be impractical in Canada for several reasons. If a quota meant that only part of the Montreal refinery requirements would be met from Canadian crude sources, this would pose many problems from an investment viewpoint. Even if the quota were 50 per cent of crude runs, this volume would not justify the very favourable pipeline tariffs being assumed in certain proposals. In a word, it is unwise to tamper with the natural balance of economic forces. Take the example of the Montreal refiners and those in the Maritimes. A system of quotas restricting foreign crude imports into Montreal would give Maritime refiners an artificial competitive advantage. As Quebec refineries were compelled to a diet of high-cost crude, the unrestricted Maritime refiners would be able to infiltrate the Montreal refiners' market.

Implications for Canada's Merchant Fleet:  
Construction of a pipeline to Montreal would also dislocate part of Canada's merchant marine. Our company alone has three ocean tankers engaged in crude movement to Montreal. These vessels sail under Canadian registry and carry Canadian crews. We have an additional supertanker under construction in





Quebec, designed specifically for this trade. Harbour facilities at Montreal and Portland represent an important investment. In part or in all, these would be made redundant by a pipeline from the west.

Shell's Interest in New Markets: The figures which we have disclosed earlier for our own company show that on a major part of our accumulated investment we have had no return, and will receive no return, at present production allowables, for some time to come. No one is more interested than our company in obtaining new markets for Canadian crude oil in which we can share and so improve our revenue and obtain a return on our very substantial investment in Western Canada. What we fear is a failure to resist the temptation to cure a short-term cyclical difficulty by basically uneconomic measures which possess serious long-term dangers for Canada's economy and which can only be sustained by artificial means.

Who gains by Artifices: The whole discussion of moving Canadian crude to Montreal has been prompted by the temporary difficulties of certain producers in Alberta. But would a pipeline to Montreal really help the Alberta producer? There is no guarantee that once this proposed line was built the Montreal refiners would nominate Alberta crude. Saskatchewan has the advantage of geography, wellhead price and unfettered production. The sour







crudes of Saskatchewan might be very acceptable to certain Montreal refiners who are well equipped to handle this type of material. It might well be that the plan -- if indeed it is designed to help the Alberta independent producers -- might not achieve this end so much as to increase movements of Saskatchewan crude.

Loss of Revenue Resulting from Artifices: Finally, by moving Canadian crude into Montreal by pipeline a new -- and lower -- price structure would surely evolve as Canadian producers were forced to compete with foreign sources and fluctuating tanker rates. As more and more so-called "supertankers" are built, replacing the higher cost T-2's inherited from World War II, it seems likely the present low rates will be maintained. Some of these new, larger vessels can actually operate profitably at rates below those assumed in the calculations used in this brief (United States Maritime Commission minus 40 per cent.)

Existing Large Investment not Based on Artifices: The oil industry in Eastern Canada has truly grown up in the post-war decade and leads in many ways the remarkable industrial development of Canada. There has evolved an intricate pattern of supply, manufacture and distribution of petroleum products based upon logical economic principles. The nation's largest refining centre has mushroomed





at Montreal where an estimated \$300 million has been invested in refining units alone. A further sum of about \$200 million has been invested in the Portland/Montreal Pipe Line and numerous deep sea tankers. This system of supply recognizes the fact that ocean-borne crude is traditionally cheaper than crude borne over any great land distance. A policy involving tariffs or quotas designed to restrict the free flow of deep water crude supply must inevitably jeopardize such investments, on which, it should be mentioned in passing, substantial debt remains outstanding.

Vulnerable Economics: To build a crude oil pipeline from Western Canada to Montreal is an expensive and unfortunately escape-barred venture. It is escape-barred because, before it can be built, it will commit both refiner and producer to a price structure which they both may well regret. The refiners must pledge themselves to a high cost source of raw material, relative to cheaper ocean-borne crudes. Producers must commit their crude to a distant market, exposed to the competition of the most competitive crude sources in the world, as other economically situated growth markets become available closer at hand -- a \$250-\$300 million investment which cannot show long-term economic justification. In our view, by ordinary commercial standards, this pipeline cannot be financed.





Conclusion: Possibly in conclusion one can look at this problem in an even wider field of vision. The importation of crude oil into Eastern Canada is only one aspect of the intricate network of international trade from which Canadians derive their livelihood. International trade depends upon the relative costs of producing various commodities in different countries. Commodities move from countries where they are comparatively cheap in real costs of production, to countries where these comparative costs are higher. And these costs must include elements of transportation charges, especially in a country the size of Canada. Thus surely it is to Canada's net advantage to import crude oil into the Eastern Provinces and pay for these imports in primary commodities such as cereals and forest products which can be produced in Canada at a lower cost. By so doing the real cost of petroleum-derived energy is minimized -- a benefit not to some sectional interest -- but to the greatest good of the greatest number of Canadians.

---(See pp. 31 - 36 of original brief for the following Tables:)

Disposition of Canadian Crude Oil Production (does not include Natural Gas liquids), MB/D, 1954-1958 (1958 estimated).

Disposition of Canadian Crude Oil Production and Imports -- 1957, MB/D.

Exports of Canadian Crude Oil by Destination and Province of Origin, 1955-1958.







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TORONTO, ONTARIO

4500

Crude Oil Imports into Canada -- 1950-1958  
(MB/D).

Petroleum Product Imports into Canada -- 1951-1958  
(MB/D).

Laid Down Costs of Selected Crudes at Sarnia,  
Illinois (39.6° A.P.I.).





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MR. ASH: Sir, I now have a brief summary of what has been said today which I would like to read.

### SECTION III. TAXATION.

Introduction: We have now completed the first two main sections of our submission. The first covered oil and gas exploration and production, together with reserves and producibility, the matter of incentive, and the vital question of finding new markets -- which means moving into a waiting export market. The second had to do with the disposal or marketing of Canadian crude oil. In both gas and oil, when we consider market outlets for Canada's substantial reserves, we are dealing with matters not entirely within our own control. We now turn -- in Section III -- to an important factor in Canada's oil and gas economy, which it is in our power, and we submit in our national interest, to rectify.

At this point, therefore, it might be well to summarize what we have said so far. We have tried to show that:

1. Canada's oil and gas resources in the west are potentially of such magnitude as virtually to guarantee for the foreseeable future Canada's requirements of these forms of energy.
2. These underground supplies of petroleum will be brought to the surface and made available for the Canadian consumer if adequate incentive exists.







3. The experience of our company indicates that the short term incentive has been meagre and the past and continuing heavy investment of the industry, including Shell, is a long term proposition.
4. In the short term the outlook for the export growth of our oil markets has temporarily reached a plateau.
5. There is an immediate export market for gas which Canada has the necessary reserves to supply, the revenue from which would tend to offset the loss from the temporary levelling of the oil markets.
6. Meeting a temporary short-term problem with measures having such grave long-term implications as forcing the heavy investment in a pipe line to Montreal, is a complex and dangerous step. Rather we advocate, in addition to taking the gas markets mentioned above, the construction of refining capacity in the highly economic area of the Toronto-Hamilton-Western Ontario markets now tributary to western crude oil.

Having made these points, we would turn to what is a most important difficulty -- and one which it is in Canada's power to cure -- facing Canadian oil in competing in world markets, as it now has to do. This is Canadian taxation.





Canadian taxation presently places Canadian oil at a disadvantage in its visible export markets. These markets lie primarily in the Upper Mid-Continent and Pacific Coast regions of the United States. Yet in comparative terms the tax differential between the United States oil and gas producer supplying those markets, and the Canadian producer attempting to supply them, represents a built-in penalty on the Canadian producer -- of our own making -- as a result of materially less liberal tax treatment in Canada.

We illustrate this below with some comparative figures for similar properties in the two countries.

MR. PATTILLO: Mr. Ash, I am sorry to interrupt you here, but I was thinking that perhaps this section of the brief could be taken as read because we have not been dealing with the taxation problem at this stage before the Commission. We, of course, have to give the matter consideration, and we appreciate very much what your company has said on the subject, what others are saying, but it really requires study by experts in the field, and we don't want to deal with it as such. So if you wouldn't mind going over to the next section in which you deal with energy.

MR. ASH: Very good, sir.

THE CHAIRMAN: We do wish your section on taxation to go into the record.





MR. ASH: Yes.

CAPITAL INVESTMENTS, COST DEPLETION, SALES  
AND ABANDONMENTS OF PROPERTIES. Comparison of United  
States and Canadian Income Tax Provisions: Many of  
the differences between the United States and Canadian  
income tax effects of transactions in oil and gas  
properties are a consequence of the fact that capital  
gains and losses are taken into account for United  
States income tax but for Canadian income tax they  
are not; nor is any recovery of capital cost of  
property allowed in Canada except through deprecia-  
tion of closely defined categories of depreciable  
property. Some of the main effects of this difference  
in principle are:

1. In the United States the cost of acquisi-  
tion of an oil or gas reserve is recoverable through  
charges for depletion which are deducted from the  
income from the oil or gas produced, before taxable  
income arises. The same depletion of cost is allowed  
to the purchaser of a royalty or other continuing  
payment. In Canada the purchaser of an oil or gas  
property or of a royalty or other interest is not  
permitted any allowance against his income on  
account of his capital cost (although he may be  
entitled to a depletion allowance computed as a per-  
centage of income without regard to cost of the  
property as explained in detail below).

Example: (a) X, an individual, corporation,







partnership or trust, buys an oil lease for \$500,000. At the close of the year it is estimated to have a proven reserve of 725,000 barrels, and it has produced 25,000 barrels during the year --

In the United States -- X is entitled to an allowance for depletion of his capital costs of the property and, so far as the acquisition cost is concerned, this deduction will be  $25/750 \times \$500,000$  or \$16,666 which may be deducted against income from this property or any other income he may have. (It may be that his depletion on the property computed on a percentage basis would be more than \$16,666, in which case he would deduct percentage depletion instead.)

In Canada -- X would not be entitled to any allowance against income on account of his capital cost of \$500,000 but would be entitled to an allowance (see further discussion below) based on  $33 \frac{1}{3}\%$  of his entire production income after all deductions.

(b) X buys a one-eighth royalty in a lease, for \$50,000. The lease has a proven reserve of 360,000 barrels at the close of the year and produced 40,000 barrels during the year (i.e., X received 5,000 barrels produced out of 50,000 barrels in his share of the reserve).

In the United States -- X may deduct from his income  $5/50$ ths of \$50,000 or \$5,000. (X would





be entitled to percentage depletion in lieu of the \$5,000 if the percentage depletion allowance turned out to be more than \$5,000).

In Canada -- X would not be entitled to any allowance against his royalty income on account of his capital cost but would be entitled to a percentage depletion allowance of 25% of his gross income for the year from the royalty.

2. In the United States the sale of an oil or gas property, if owned more than six months and not included in inventory or held for sale to customers in the ordinary course of business, would give rise to a tax on the profit computed by subtracting from the sales proceeds the amount of the capital cost which has not been recovered through depletion allowances, but this tax would be limited to the capital gain rate of 25%. A loss on the sale of the property if it has been used in the trade or business would be deducted in full against ordinary income. On the abandonment of the property proven worthless the remaining capital cost would be deducted in full against ordinary income.

In Canada it is supposed that the profit on the sale under the same circumstances would not be subject to tax, and a loss on sale or abandonment would not be deductible to any extent -- with the sole exception that the cost of a lease which has been acquired from a governmental body may be deducted







when the lease is abandoned if no production has been obtained and no part of the cost has been recovered. This statement for Canada, however, has to be made bearing in mind that there is a pronounced tendency for the Department of National Revenue and the courts to take the view that properties which have been explored and developed are held for the possible purpose, among others, of making a trading profit by selling them, and that this purpose makes the profit taxable as ordinary income, while there is no indication that a loss on the sale or abandonment would be allowed as a deduction.

Summary and Comparison: The United States investor in oil or gas properties always knows that he cannot be deemed to have taxable income without having his capital cost returned to him free of tax. If he sells a property he knows that the tax on his profit will be limited to 25% thereof. On the other hand, if he has been using the property in a going business his loss on the sale thereof or, if it proves worthless, his loss on its abandonment will be allowed in full against ordinary income. These provisions tend to encourage a greater degree of risk-taking in capital investment in the United States than in Canada where there is no provision for amortizing capital cost against income, where other development and production expenses may deprive the investor of any allowance for depletion, and where the sale of a





developed property may well be held to produce ordinary income while the sale at a loss or the abandonment of the investment is not reflected against income at all.

These observations apply to investments by individuals as well as by corporations. In fact, the wealthy individual investor perhaps more than the corporation in the United States would be encouraged to part with his capital, more readily than his counterpart in Canada, because of his knowledge that he can limit his tax on his profit to 25% rather than a possible 91% ordinary income tax if he sees fit to sell, while he is certain at the very least to recover his cost against ordinary income through cost depletion, or by deducting his cost against his general ordinary income if his investment proves worthless.

#### Exploration, Drilling and Development

Costs: In Canada, expenditures for exploration and development and the cost of drilling a well would be regarded primarily as capital outlays which would not be deductible to arrive at taxable income, except for express provisions in Section 83A of the Act that drilling and exploration costs may be deducted from income. The deduction, however, is only allowed to a corporation whose principal business is production, refining or marketing of oil or natural gas, or exploring or drilling, or to an





association, partnership or syndicate formed to explore or drill for petroleum or natural gas. Such an organization may deduct its drilling and exploration costs from income in the current year, or, if the current year's income is insufficient, against the income of succeeding years without limitation of time, until the costs have been fully offset against income.

In the United States, intangible drilling and the development costs of drilling wells are deductible as an expense against ordinary income whether incurred by a corporation or an individual, but expenses of exploration and development of properties, including geological and geophysical expenses, must be capitalized to the extent that they result in the acquisition or development of values which will be realized over future years; unsuccessful or abortive exploration and development expenses are written off currently. In the United States, if deductible expenditures exceed income the loss may be carried back against the income of the two previous years and forward against income of five years, as compared with Canada where exploration and drilling expenses of corporations, associations, partnerships and syndicates may be carried forward indefinitely.

Summary: The Canadian provisions for the tax-free recovery of drilling and exploration







expenses are much more liberal than in the United States since in Canada all of such expenses may be deducted while in the United States a substantial part thereof must be capitalized, nor is there any time limit in Canada on the period in which they must be applied against income, provided that the expenses are incurred by a corporation whose primary business is the oil or gas business, or by an association, partnership or syndicate formed to carry on such business. In Canada, however, a corporation primarily engaged in some other business or a corporation, partnership or syndicate formed to carry on some other business, or an individual, is discouraged from venturing to invest its surplus funds in direct oil or gas exploration or drilling since its costs would largely be capital outlays with no provision for their future recovery, or at best might be classified as expenses making up a business loss which can be carried forward five years against income of the same business only.

These provisions in Canada provide a real and liberal inducement, at least for the organization whose principal business is oil or gas, to initiate exploration and drilling activities. However, if the organization has reached the stage where it has any substantial amount of production the incentive to incur further exploration and drilling expenditures is taken away in large part by the negative effect





of these expenditures on the allowance for depletion, as explained below.

The Percentage Depletion Allowance as a Deduction from Income: It has already been mentioned that there is an allowance for United States income tax purposes for the recovery of the capital cost of an oil reserve or interest therein, through deductions for depletion of the capital cost spread over the estimated life of the reserve on a unit of production basis. There is a further allowance under the United States tax law, known as percentage depletion, which is designed to provide incentive for investment and reinvestment of funds in oil and gas development. This allowance, a deduction from income, computed as  $27\frac{1}{2}\%$  of the gross income from the property, is limited, however, to 50% of the net income from the property. This is not in addition to cost depletion, but cost depletion is allowed in lieu of percentage depletion if the cost depletion allowance is greater than the allowance on the percentage basis, as may be the case where acquisition cost is high or where production expenses are high so that the "net income" is relatively low.

Under the Canadian tax law the only allowance of this kind is the allowance of  $33\frac{1}{3}\%$  of net production income.

The main points of difference are these --







and a few examples will show their impact:

1. The United States  $27\frac{1}{2}\%$  allowance is computed on the gross income from the property, which means the value of the oil at the well-head.

2. The United States 50% allowance is computed on the net income from the particular property -- i.e., the gross income less the expenses attributable to the particular property for depreciation, operating expense and overhead, development expense and so forth.

3. In either case the "property" for which the allowance is computed is, generally speaking, each separate lease. If there are two leases, one in development and the other in production, the development expenses of the former are not deducted in arriving at the net income of the latter.

4. The Canadian allowance of  $33\frac{1}{3}\%$  of net production profits is computed by aggregating the income and expenses for all of the taxpayer's oil and gas and other mineral resources. From the entire production revenue there must be deducted, under current regulations, (a) any losses in connection with production from any of his resources, (b) any deductible exploration, including geophysical and geological, and drilling expenses either for the current year or carried over to the current year from previous years of losses, and (c) interest charges on borrowed money and capital cost allowances,





in connection with the exploration and production operations.

Example:

X Company has three producing leases:

UNITED STATES

	Lease No. 1	Lease No. 2	Lease No. 3	Total
Gross Income.....	\$370,000	\$147,000	\$250,700	
Production Expense, Depreciation, Taxes and Overhead...	<u>58,500</u>	<u>87,200</u>	<u>43,000</u>	
Net Income Before Deple- tion.....	\$311,500	\$ 59,800	\$207,700	\$579,000
Depletion Allowance.....	\$101,750	\$ 29,900	\$ 68,942	<u>\$200,592</u>
Taxable Net Income.....				\$378,408

If X Company acquired an additional, un-  
developed property, Lease No. 4, and spent  
\$442,400 in the development of such proper-  
ty during the year it would deduct from  
taxable income such \$442,400 less a por-  
tion thereof required to be capitalized,  
say \$70,000, or..... \$372,400

Taxable Net Income..... \$ 6,008

X Company's depletion allowance is un-  
disturbed by its expenditures on Lease No. 4.

(See next page for table.)





CANADA

	Lease No. 1	Lease No. 2	Lease No. 3	Total
Net Income Before Depletion.....	\$311,500	\$59,800	\$207,700	\$579,000
Depletion Allowance (33 1/3% of over- all net produc- tion income)...				<u>\$193,000</u>
Taxable Net Income				\$386,000

If X Company spent \$442,400 in the develop-  
ment of Lease No. 4 during the year the  
depletion allowance would be revised as  
follows:

Net Income from Leases Nos. 1, 2 and 3 before Depletion.....	\$579,000
Less Lease No. 4 expenditures.....	<u>\$442,000</u>
Net Income before Depletion.....	\$137,000
Depletion at 33 1/3% of \$137,000.....	<u>\$ 45,666</u>
Taxable Net Income.....	\$ 91,334

Thus, by entering into a new development  
venture after it has achieved a net  
production income, X Company reduces its  
depletion allowance by \$147,334 from  
\$193,000 to \$45,666. While Canadian law  
permits X Company a more liberal explora-  
tion and drilling expense deduction than  
its American counterpart, X Company never-  
theless has \$91,334 of taxable income  
remaining while its American counterpart  
has only \$6,008.

Summary and Comparison: The depletion  
allowance in Canada, beside giving the investor no  
assurance of the tax-free recovery of his capital  
cost, is less liberal than that in the United States  
under almost any conceivable circumstances. The  
reduction of the Canadian depletion allowance by any  
increase in a taxpayer's expenditures for further  
exploration or exploratory or developmental drilling must







necessarily have a negative influence in any company's decision whether or not to engage in such further expenditures once a production stage has been reached.

#### SECTION IV. NATIONAL ENERGY BOARD.

In conclusion, we would like, as a member of the oil and gas industry, to say a word about section (c) of the terms of reference of The Royal Commission on Energy. Section (c) refers to the establishment of a National Energy Board to administer an energy policy subject to the control and authority of Parliament.

The Canadian oil and gas industry is the first to urge that the Parliament of Canada should at all times have a national energy policy and administer it in the best interests of the citizens of Canada. However while we urge that a national policy be established and administered, we question that a National Energy Board governing all forms of energy is the right way to do this. Our industry has reached its present healthy state through a system of free enterprise. We feel its continued growth will best be fostered with a minimum of intervention.

Material control of Canada's petroleum resources exists through present legislation both Dominion and Provincial. The flexibility of such legislation and its ability to march with the times





legislation and its ability to march with the times has amply been demonstrated. The machinery for its administration is in being and we see no necessity for the superimposition of another bureau -- indeed we feel this would be more of a hindrance than a help.

We have said already the first criterion for the Canadian oil and gas industry is the long-term interest of the Canadian consumer. We submit that such a criterion can best be ensured by the administration of the Dominion and Provincial Governments, through their existing departmental organizations and the Board of Transport Commissioners.

THE CHAIRMAN: Thank you very much, Mr. Ash.  
Mr. Pattillo.

MR. PATTILLO: Mr. Ash, looking at page 1 of your submission, in the second paragraph you say: "Shell Oil Company of Canada, Limited is owned 50% by Canadian Shell Limited, an Ontario company, and 50% by Shell Oil Company, a Delaware corporation", and then you go on to say that of the stock of Shell Oil Company 65.32% is owned by Canadian Shell Limited and the balance by the public. Now, would you please tell us about Shell Oil Company of Canada, Limited. Is that a Dominion or an Ontario company?

MR. ASH: Shell Oil Company of Canada, Limited is a Dominion corporation.







MR. PATTILLO: Is it a public or a private corporation?

MR. ASH: It is a private corporation.

MR. PATTILLO: So that it doesn't publish balance sheets.

MR. ASH: No, sir.

MR. PATTILLO: Now, let's go next to Canadian Shell Limited. Canadian Shell, you explain, is not an operating company but a holding company only. Is it a private or is it a public company?

MR. ASH: It is a private company.

MR. PATTILLO: And who owns the shares in it?

MR. ASH: Well, sir, it is a little complex to simplify it and I think really to get to the meat of the whole thing ultimately, it is owned by Shell Transport and Trading, a British corporation, a public corporation, whose shares are on the New York Stock Exchange, and 60% by the Royal Dutch Petroleum Company, a Netherlands Corporation, whose shares are also on the New York Stock Exchange.

MR. PATTILLO: And this 60-40 division between Royal Dutch and the Shell Petroleum is carried out throughout all of its subsidiary companies, is it not, throughout the world?

MR. ASH: Those are the proportions in which the Shell interest in all companies throughout the world are held. Many of those companies





have also a public ownership as well.

MR. PATTILLO: But as between those two partners, that is the division.

MR. ASH: Correct.

MR. PATTILLO: Now, do any of the subsidiary companies of these two partners carry on a producing business in Venezuela?

MR. ASH: Yes, sir.

MR. PATTILLO: Do they carry on a producing business in the Middle East?

MR. ASH: Yes, sir.

MR. PATTILLO: Do they carry on a producing business in the Sumatra area?

MR. ASH: Yes, sir.

MR. PATTILLO: And do they carry on a refining business on the Pacific Coast of the United States?

MR. ASH: Yes, sir.

MR. PATTILLO: Do they carry on a refining business in what I would describe as the Michigan area of the United States?

MR. ASH: No, sir.

MR. PATTILLO: What about the East Coast of the United States?

MR. ASH: No, sir.

MR. PATTILLO: Now, in Canada where are the refineries of the Shell interest?

MR. ASH: In Montreal and in Vancouver.





MR. PATTILLO: And the capacity of the Montreal refinery is?

MR. ASH: Roughly 60,000 barrels a day, and Vancouver roughly 20,000 barrels a day.

MR. PATTILLO: Now, on the Pacific Coast where are the refineries of the Shell organization situate and what are their capacities?

MR. ASH: I am not sure if I can give you the capacities. The first is at Anacortes in Washington, which is all-Canadian, with a capacity of about 50,000 barrels a day. The second is in the San Francisco area --

MR. PATTILLO: I think the capacity of that refinery, according to my information, is 165,000 barrels a day.

MR. ASH: No, it isn't. There is a refinery at San Francisco and in the Los Angeles area which together would have a capacity of about 165,000.

MR. PATTILLO: But you don't know the capacity of the refinery in the San Francisco area?

MR. ASH: No.

MR. PATTILLO: In the operation of your Montreal refinery is the crude that is being brought in by Shell all Shell owner-shipped crude?

MR. ASH: We batch the crude from affiliated companies in Venezuela and in the Near East.

MR. PATTILLO: So that as far as looking







at the Shell organization as a whole is concerned, then it is owner-shipped.

MR. ASH: I think that is a correct statement, sir.

MR. PATTILLO: Is it transported by tankers owned by the Shell organization or in tankers not owned by any of the Shell organization but under charter?

MR. ASH: Fundamentally it is transported by part-owned tankers, some of them owned by the Canadian company, some by the British company, Shell, and, of course, we also have chartered tankers.

MR. PATTILLO: How would you describe the Eagle? When you are talking about a Shell interest, would you include the Eagle in that?

MR. ASH: Yes, sir.

MR. PATTILLO: Now, when you use tankers under charter are they spot charters or long-term?

MR. ASH: Both.

MR. PATTILLO: You have some going to Montreal under long-term, some under spot?

MR. ASH: Yes.

MR. PATTILLO: Have you been running the refinery at Montreal at full capacity?

MR. ASH: Broadly speaking, yes, sir. There have been fluctuations.

MR. PATTILLO: So you would be bringing in crude at the rate of 60,000 barrels a day approximately?





MR. ASH: Today.

MR. PATTILLO: What proportion of that comes in over the Montreal-Portland pipeline?

MR. ASH: In close navigation it all comes out of the pipeline. Over the year as a whole I don't have the figure. The predominant portion comes through the Montreal-Portland pipeline.

MR. PATTILLO: And has Shell an interest in that pipeline?

MR. ASH: Yes, sir.

MR. PATTILLO: What is its percentage interest?

MR. ASH: 18%.

MR. PATTILLO: Who are the other shareholders in that line?

MR. ASH: The other shareholders are Imperial Oil Company, British-American Oil, McColl-Frontenac and Canadian Petrofina.

MR. PATTILLO: Now, part of the products of your refinery in Montreal go over this line to Toronto.

MR. ASH: Yes, sir.

MR. PATTILLO: Does Shell have an interest in that line?

MR. ASH: We have a one-third interest in that line.

MR. PATTILLO: And who are the other







shareholders in that line?

MR. ASH: British-American and McColl-Frontenac.

MR. PATTILLO: It has a daily capacity of 60,000 barrels of products; is that correct?

MR. ASH: Yes, close to that, possibly 64,000.

MR. PATTILLO: What proportion of that capacity does Shell utilize?

MR. ASH: I can't give you an exact figure, sir, but we aim to come close to our one-third share in the line.

MR. PATTILLO: Can you tell me a little bit about that line -- the outside dimension?

MR. ASH: It is a 10-inch pipeline, Toronto on to Hamilton, and an 8-inch branch line to Ottawa.

MR. PATTILLO: Is it so built that if it is deemed desirable to do so the flow could be reversed and it could flow from Toronto to Montreal rather than from Montreal to Toronto?

MR. ASH: It would be a highly complex thing to do with a great many disadvantages flowing from such an action.

MR. PATTILLO: Another thing, if it were decided that it was advisable to do so, could it be converted for the purpose of carrying crude rather than products?

MR. ASH: At the sacrifice of carrying products.





MR. PATTILLO: Yes, but I mean from the engineering point of view, there is no problem in carrying crude rather than products?

MR. ASH: It can be done, engineering-wise, but there are many economic problems.

MR. PATTILLO: I am going to come to all those later. I just wanted to get the general picture now, if I may.

Now, has Shell any interest in Inter-provincial Pipe Line?

MR. ASH: No, sir.

MR. PATTILLO: Have you ever been a shipper over Interprovincial Pipe Line?

MR. ASH: No, sir.

MR. PATTILLO: What is Shell's interest in Trans Mountain?

MR. ASH: 8 per cent, plus some decimal points.

MR. PATTILLO: Are you one of the companies that signed deficiency agreements so far as Trans Mountain is concerned?

MR. ASH: Yes, sir.

MR. PATTILLO: Has Shell ever shipped over Trans Mountain's line?

MR. ASH: Yes.

MR. PATTILLO: To where?

MR. ASH: To Vancouver and to Anacortes, Washington.





MR. PATTILLO: At the present time, having to do with your Vancouver refinery, are all its crude requirements coming over the Trans Mountain Pipe Line?

MR. ASH: Yes, all its crude.

MR. PATTILLO: Has that refinery been in existence for some years?

MR. ASH: Very many years. Of course, it started very small, sir, and did not get to its present size until just a few years ago.

MR. PATTILLO: Prior to Trans Mountain Pipe Line, was all of its crude imported?

MR. ASH: Yes.

MR. PATTILLO: From where?

MR. ASH: From California.

MR. PATTILLO: Now, the Anacortes refinery: how long has it been in existence?

MR. ASH: About 2 years, sir, I believe.

MR. PATTILLO: And since its erection, has it acquired all of its crude requirements over the Trans Mountain pipeline?

MR. ASH: No.

MR. PATTILLO: Did it at any time take all of its crude requirements over the Trans Mountain pipeline?

MR. ASH: Yes, it did.

MR. PATTILLO: When was that practice discontinued?







MR. ASH: Last year.

MR. PATTILLO: What month; can you tell me?

MR. ASH: No, I'm afraid I can't, sir.

MR. PATTILLO: What is the present situation today? Is it still getting part of its requirements only over the Trans Mountain pipeline?

MR. ASH: We are not absolutely sure of these figures, sir. It is not our company, but the proportions are, roughly, that it is taking, at the moment, 10,000 barrels a day of Canadian crude and possibly twice that amount of California crude.

MR. PATTILLO: Of California crude?

MR. ASH: Yes.

MR. PATTILLO: When you say California crude, you mean produced in California?

MR. ASH: I mean produced in California.

MR. PATTILLO: Has this refinery in Anacortes at any time, to your knowledge, taken what I would call tanker crude?

MR. ASH: California crude is moved by tanker.

MR. PATTILLO: It is moved by tanker?

MR. ASH: Yes. If you mean foreign, non-North American crude, sir, I think the answer is no.

MR. PATTILLO: What about the refinery in the San Francisco Bay area? Did it ever, to your knowledge, obtain crude shipped over Trans Mountain?





MR. ASH: I think, in the Suez crisis --  
I am wrong, sir. We did not, apparently.

MR. PATTILLO: You did not, so far as you  
know?

MR. ASH: We have never shipped Canadian  
crude to San Francisco.

MR. PATTILLO: Do you know what I mean by  
the four corners area?

MR. ASH: I'm sorry. Would you mind repeat-  
ing that question?

MR. PATTILLO: Do you know what I mean  
by the four corners area?

MR. ASH: Yes.

MR. PATTILLO: Is there a pipeline being  
built that is just about ready to come into operation  
from the four corners area to California?

MR. ASH: Almost finished.

MR. PATTILLO: Has Shell got an interest  
in that?

MR. ASH: Yes.

MR. PATTILLO: Is Shell the manager of  
that line?

MR. ASH: Shell Pipeline Corporation of the  
United States is manager of the line.

MR. PATTILLO: And that would be an  
affiliated company ---

MR. ASH: A subsidiary of Shell Oil Com-  
pany, the Delaware corporation I mentioned earlier.





MR. PATTILLO: And that pipeline is going to ship oil from the four corners to where?

MR. ASH: To the Los Angeles area.

MR. PATTILLO: And it will supply, amongst others, the Shell refinery there?

MR. ASH: That is correct.

MR. PATTILLO: Now, does Shell import any products from Canada?

MR. ASH: Yes, sir.

MR. PATTILLO: Where? What is the place of importation?

MR. ASH: We import heating oil in Eastern Canada.

MR. PATTILLO: Into Montreal or into Toronto?

MR. ASH: Into Montreal and into Toronto.

MR. PATTILLO: And is that imported from a Shell refinery?

MR. ASH: No, sir.

MR. PATTILLO: That is purchased from third parties, is that right?

MR. ASH: That is right.

MR. PATTILLO: What quantity of heating oil do you import, in barrels a day?

MR. ASH: I have some figures, sir. May I turn this over to Mr. Ritchie?

MR. PATTILLO: Certainly. Any question that I ask you can direct to anybody represented.

MR. RITCHIE: Are you wanting the quantity







we imported in 1957 or what we think we may import in 1958?

MR. PATTILLO: Well, if you have got them both, let us have them both.

MR. RITCHIE: In 1957 we imported, in Eastern Canada, a total of 2,150,000-odd barrels of finished products. In 1958 we will probably import in the order of 2 million barrels.

MR. PATTILLO: Can you break those down for me, Mr. Ritchie, as to what it is 2 millions of?

MR. RITCHIE: Yes, there is aviation gasoline in the order of 540,000 barrels; heavy fuel in the order of 750,000 barrels; heating oil in the order of 800,000 barrels. That was in 1957.

MR. PATTILLO: And those proportions pretty well continue through 1958?

MR. RITCHIE: Roughly.

MR. PATTILLO: Any significant change in any one?

MR. RITCHIE: Not significant.

MR. PATTILLO: Now, Mr. Ash, you have said that you do not consider the proposed pipeline from Alberta to Montreal an economically feasible proposition and you have suggested that the producers in Canada would be up against very heavy competition from Venezuela and the mid-East if they did attempt to put their oil in there.

How much is it costing the Shell organization--





and I am using the word "organization" rather than "your company" because there may be bookkeeping matters that I am not interested in -- how much is it costing the Shell organization to put Venezuelan oil into Montreal, laid down, per barrel?

MR. ASH: All I know, sir, is what it is costing us, meaning my company.

MR. PATTILLO: Well, we will manoeuvre this around somehow. What do you mean when you say it costs you?

MR. ASH: May I turn it over to Mr. Ritchie? We have figures here.

MR. PATTILLO: Right.

MR. RITCHIE: We currently run with Mesa crude, which is a 30.8 prerogative, a Venezuelan crude, the only Venezuelan crude we are currently running. The f.o.b. loading port is 2.79¢ and, at U.S.M.C. minus 40, that would lay down at 3.07 3/4¢ a barrel, Canadian funds.

MR. PATTILLO: Mr. Ritchie, when you give that f.o.b. loading port, is that a posted price?

MR. RITCHIE: It is.

MR. PATTILLO: That is not much help, is it, in what I want to get at?

How much is the transportation cost, per barrel?

MR. RITCHIE: When you talk about transportation cost, are you talking about the ocean cost





or the full transportation cost, including through the Portland-Montreal pipeline?

MR. PATTILLO: Let us take the full transportation cost and break it down.

MR. RITCHIE: Well, I will have to do some addition, if you want it that way, sir.

Let me tell you what the elements are and somebody can check my addition. The ocean freight at U.S.M.C. minus 40 is \$ .246. The cost of transportation, the terminalling at Portland is 2.9¢. The pipeline allowance is 1 1/2¢. The pipeline tariff on the Portland pipeline is 6¢. I add that up as 35¢.

Now, that is all in U.S. funds. It should be converted into Canadian funds, to which you have to add the Canadian tariff on the Montreal section, which is 3¢.

MR. PATTILLO: The Canadian tariff?

MR. RITCHIE: The Portland-Montreal pipeline consists of two companies, splitting at the border, on which there is a U.S. tariff for the Portland section and a Canadian tariff for the Montreal section.

MR. PATTILLO: Oh. So it is 35¢ in U.S. funds and 3¢ in Canadian funds, is that it?

MR. RITCHIE: Yes, sir.

MR. PATTILLO: Now, how long is this Canadian section of the Portland-Montreal line?

MR. RITCHIE: I think I can give you that







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information, sir, but you will have to wait until I dig it out here.

MR. PATTILLO: I also want to know the length of the U.S. section, please.





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MR. RITCHIE: The total mileage from Portland to Montreal is 236.7. I am afraid I cannot give you the breakdown; the information should be available.

MR. PATTILLO: Which company is the subsidiary of the other?

MR. RITCHIE: The American Company is the subsidiary of the Montreal Company.

MR. PATTILLO: How long has this company been in operation; this pipeline company?

MR. RITCHIE: It was built during the war to overcome the menace of submarines into the Gulf.

MR. PATTILLO: What was the invested share capital?

MR. RITCHIE: Excuse me, sir, to answer fully your previous question -- it was constructed and in operation in 1941. At that time it was a 12 inch line and subsequently it was looped throughout so there are now two lines; one 12 inch and one 18 inch.

MR. PATTILLO: Can you tell me, and I am not asking you about earnings retained in the company, I am asking you now what was the invested share capital in total dollars?

MR. RITCHIE: You will appreciate we only have an 18% interest in this and I am not sure we have all the information available.

MR. PATTILLO: Which interest is the more substantial interest; if they are going to be here --.

MR. RITCHIE: You could ask Portland pipe line.





Montreal pipe line intend to give some capital data which will be available to the Commission or you could ask Imperial Oil who have double our percentage interest but I will try to answer any question you put to me.

MR. PATTILLO: Could you tell me from the material you have if you could give us the aggregate monies invested by the shareholders in this company per shares?

MR. RITCHIE: No, I cannot give you that. The invested fixed assets are a little over \$37 million.

MR. PATTILLO: You mean that is the capital cost of the line and its facilities?

MR. RITCHIE: That is right.

MR. PATTILLO: Well, perhaps you can give me this: how much did Shell pay for its 18% interest?

MR. RITCHIE: No, sir, I have not that figure here but I can, obviously, get it.

MR. PATTILLO: Can you tell me this: has Shell received any return on its investment in this line?

MR. RITCHIE: In the initial stages there were, I believe, two small dividends paid of \$10 per share; that was 1926, 1927 for a total of \$14,400. That is not to Shell; that is the total paid out to all companies over those two years.

MR. PATTILLO: Has anything been paid since?

MR. RITCHIE: Nothing paid since and in







addition there have been substantial borrowings to buy Portland and Montreal pipelines to generate the cash necessary to put in additional facilities.

MR. PATTILLO: Can you give me any help on the retained earnings of this company?

MR. RITCHIE: I believe, sir, all that information would be available when Portland pipeline give you their data.

THE CHAIRMAN: Is there anyone in the room from Portland pipeline?

MR. RITCHIE: Not that I am aware of.

MR. PATTILLO: Have we anybody in the room that has this information available who may be appearing on the stand at a later time?

MR. J. H. HAMILTON, Q.C. (Imperial Oil):  
Mr. Chairman, I am not just sure what information I have; I would have to check to be certain but I have certain information available.

THE CHAIRMAN: Mr. Hamilton, have you a balance sheet and profit and loss account of the two companies either consolidated or a legal balance sheet of each?

MR. HAMILTON: I will have to check, Mr. Chairman. I am not certain just what information I have.

MR. PATTILLO: Mr. Ritchie, you have told us about this cost of transportation when part of the transporting is done by the pipeline. Can you





give me any information as to the cost of transportation when the tanker comes directly to the Port of Montreal?

MR. RITCHIE: That is not our normal procedure on Venezuelan crude and we are dealing with Venezuelan crude now.

MR. PATTILLO: All your Venezuelan crude goes to Portland?

MR. RITCHIE: The only time it does not go to Portland is when either, occasionally, due to poor characteristics of the crude it is not acceptable at Portland or for reasons of inability of capacity or scheduling or some other reason but the amount of Venezuelan crude that has come around to Montreal has been negligible.

MR. PATTILLO: And you have not any figures you can compare as to the difference in the cost of putting in the crude?

MR. RITCHIE: Yes, I can tell you; if you by-pass the Montreal Portland system and bring the crude direct to Montreal at a tanker rate of U.S.M.C. minus 35 the cost of crude laid down at Montreal approximately breaks even as against putting it through the Portland system.

MR. PATTILLO: So that in using the Portland system, your transportation costs are higher than if you by-pass and came in?

MR. RITCHIE: That is not necessarily correct.





You are drawing an inference.

MR. PATTILLO: I only got that from Mr. Ash's brief where he said tanker rates were really lower than USMC minus 40.

MR. RITCHIE: Yes, but on the basis of saying that USMC minus 35 is a break even between going through or going around. If you go around the Portland system, there are some earnings in the Portland system which your 18% interest would -- in other words, to be exactly on the same basis, you would have to take into account the earnings you would have out of going through the system and I cannot give you exactly how low the rate would have to be to break even; that is subject to calculation.

THE CHAIRMAN: That is something I was trying to find out and you have not been able to tell me so I was going at it the other way.

Now, let us come to the Middle East. Is the Shell Refinery at Montreal presently importing any crude from the Middle East which is owner-shipped by the Shell organization?

MR. RITCHIE: We do.

MR. PATTILLO: What quantity are you bringing in from the Middle East?

MR. RITCHIE: In the order of 30 to 32 thousand barrels a day.

MR. PATTILLO: How long have you been bringing in such a high proportion of Middle East oil?







MR. RITCHIE: The proportion is higher currently than it has been. We started out with completing our facilities to enable more run, with a level of 25,000 barrels a day.

MR. PATTILLO: When was that?

MR. RITCHIE: Approximately two years ago.

MR. PATTILLO: Has the quantity been increasing gradually ever since?

MR. RITCHIE: We are up to 32,000 barrels and it has been increasing gradually; that is right.

MR. PATTILLO: Please give us the figures. First of all, can you tell us what it costs the Shell organization to put a barrel of crude oil into Montreal?

MR. RITCHIE: No, sir.

MR. PATTILLO: Will you tell us what it costs the Shell Company of Canada, Limited for a barrel of crude oil from the Middle East?

MR. RITCHIE: We pay \$1.85 which is the going posted price leading at the Persian Gulf for Kuwait crude group and FA rate. The reason I quote these rates USMC minus 40, they are the rates we have used in the brief. At a rate of USMC minus 40, that would lay down through the Portland system at \$2.99-9/10 Canadian at Montreal.

MR. PATTILLO: Through the Portland system. We can break that down from the figures you have given us before as to how much of that would be water





transport. What is the laid when you bring a tanker directly into Montreal of Persian Gulf?

MR. RITCHIE: Well, sir, you have to, again, determine what rate; but if we talk about the same type of rate the cost of tankage from Persian Gulf for either Portland or Montreal is about the same quoted at USMC rate. Is the Commission aware of what the USMC rate bases are?

MR. PATTILLO: Yes.

MR. RITCHIE: The rate in dollars per long ton to Portland is \$13.05 and the rate in dollars per long ton to Montreal is \$13.20 so you have a 15¢ differential per long ton. The Kuwait group has a gravity of about 7.385 per long ton so you can see, roughly, there is a 2¢ differential at flat USMC coming direct into Montreal against going to Portland.

MR. PATTILLO: As opposed to a nine cent cost as transported over the pipeline from Portland to Montreal.

MR. RITCHIE: That is correct. The cost of going through the Portland system is 11¢ in total U.S. and Canadian plus the loss allowance and salvage value of the crude, the system cost is 12½¢.

MR. PATTILLO: So it is 2¢ opposed to 12½¢?

MR. RITCHIE: That is not quite correct either, sir, because if you come direct through Montreal you have to pay a slight wharfage charge, which wharfage charge, as in New York, is part of





the cost of the operation on the Portland system.

MR. PATTILLO: When Shell uses its own tankers for the purpose of transportation, does it find that it operates at a profit when it is charging the rate of USMC minus 40?

MR. RITCHIE: Are you talking about Shell of Canada or Shell tankers?

MR. PATTILLO: Shell organization.

MR. RITCHIE: There are two separate rates; frankly, I have no knowledge of what the cost of Shell tankers fleet are.

MR. PATTILLO: According to the brief, some of the tankers in operation are owned by Shell Oil Company of Canada, Limited; is that correct?

MR. RITCHIE: That is correct.

MR. PATTILLO: What have you found out from your experience in the operation of those tankers?

MR. RITCHIE: These three tankers, sir, are T-2 tankers which were acquired just after the war. We operate them with Canadian crews under the Canadian flag at some penalty, I must say, to Shell. We think we are being good citizens when we do this. Our cost is in the order of USMC minus 35 which, of course, is slightly higher than the cost of minus 40 as given in the brief. The current cost of our tankers-- in comparing the cost of crude laid down, you have to take what the current tankers are worth. In other words, if we were not utilizing these tankers in our







own operation what could you get for them in the outside market? We consider USMC minus 40 is conservatively on the high side. We have put it on the high side so that there will be no contention this factor is slanted towards having low crude costs for Shell of Canada.

MR. PATTILLO: In your experience with spot charters, have you had any spot charters in recent months, this year?

MR. RITCHIE: We have.

MR. PATTILLO: What are the rates?

MR. RITCHIE: We have had them as low as minus 65. It might amaze the Commission to learn there was a distress shipment yesterday fixed, I believe the name of the ship was Arabian Maru, which was fixed on the Persian Gulf to U.S. at USMC minus 80. I had never previously heard of minus 80. I only give you that to give you some idea of the distress market in which we are operating; it is really not relevant.

MR. PATTILLO: Can you give me any help about long term charters that are being negotiated today? Have you any experience as to what the rates are for them?

MR. RITCHIE: Frankly, we have not any experience ourselves but we did ask a very prominent New York broker just in the last two weeks what we could get five year charters at if we were to go out and





fix a charter at the present time and he assured me he would be delighted to take orders for as many ships as we would like at USMC minus 55. I was surprised, frankly, that you could get a five year charter at as low a rate as minus 55.

MR. PATTILLO: Mr. Chairman, I think this might be a good place to break for lunch.

THE CHAIRMAN: Gentlemen, we will adjourn the hearing until 2 o'clock this afternoon in this room.

---Whereupon the hearing adjourned at 12.30 p.m.  
until 2 o'clock p.m.





---On resuming at 2.00 p.m.

THE CHAIRMAN: Gentlemen, we shall now resume our hearing.

Mr. Pattillo?

MR. PATTILLO: I neglected this morning to get the gravity of the Middle East crude.

MR. RITCHIE: The gravity of the Middle East crude is 31, 31 1/2.

MR. PATTILLO: And the Venezuelan crude was 30.---

MR. RITCHIE: The average that we receive is 30.3.

MR. PATTILLO: Can you tell me this, Mr. Ritchie: what is the tariff of this private pipeline from Montreal to Toronto?

MR. RITCHIE: That is something I couldn't tell you because a tariff is neither published nor established as such. This is private pipeline facilities. It is owned one-third, one-third, one-third by the three companies, and the facility was designed originally to ship Montreal products throughout the system. There has been a transition with the increased capacity of the British American refinery at Clarkson and with the Regent refinery having been taken over by McColl-Frontenac. They are shipping in areas in the western part of the line that were previously supplied out of Montreal, now supplied out of the Toronto







area. The arrangement in Trans Northern is that they have a third of capacity and a third of the fixed cost and pay a proportion of the operating costs depending on the utilization of the line. Where the product goes and what the company indicates is its cost to the various areas depends on what that company wishes to charge. Have I made that clear? It is a most unusual arrangement, I must say.

MR. PATTILLO: It certainly sounds it. Let me put this to you: based on this arrangement, which I am not very clear on, what do you say it is costing Shell a barrel to move its products from Montreal into Toronto over this line?

MR. RITCHIE: I am afraid I can't answer that, sir. The reason I can't answer that, it is just the same if you are asking what it costs to refine a gallon of gasoline. Unless you establish some other very basic data, I can't tell you what it costs to send it.

MR. PATTILLO: Well, I am prepared to permit you to make any assumption that you wish as long as you explain to the Commission what the assumption is. If that would not be convenient to you, let me put it to you this way: what were your annual aggregate costs paid towards the operation of this line in the year 1957?

MR. RITCHIE: I regret, sir -- I probably can get this information for you, but I have not





got it available.

MR. PATTILLO: What I would like you to do is to get the aggregate annual costs to Shell of operating that line for the year 1957 and the aggregate amount of products of Shell which went over the line in the same year, and if it would be incorrect to divide one by the other and came up with a barrel cost, then I wish you to explain how the calculation should be done. I think some of the questions I will be directing to you in a few minutes will make it very obvious why I want to know these things.

MR. RITCHIE: Right.

MR. PATTILLO: Now, we had evidence given to us the other day by the Home Oil group that the finding and development cost of oil in the Middle East was 1/2¢ a barrel. Do you know whether or not that information is right?

MR. RITCHIE: I haven't any idea whether it is correct or not. It seems like a very nominal figure.

MR. PATTILLO: Has anybody in your group any idea?

MR. ASH: No, sir.

MR. PATTILLO: They also gave us a figure of 14¢ as the finding and development cost per barrel of Venezuelan oil. I am sorry, I thought they had said 40¢, but I read the transcript and it read 14¢, and I thought I had misunderstood it. Let us take it at





40¢. Have you any information on that, Mr. Ash?

MR. ASH: This is a finding and development cost, sir?

MR. PATTILLO: Yes, please.

MR. ASH: I have some very rough figures here. I am afraid I misheard you on your previous question; I thought you said refining. I believe that the lifting cost in -- no, I don't have the figures. I could get it for you, but I haven't the exact figures.

MR. PATTILLO: Could you get the Middle East figures too?

MR. ASH: The figure I have -- I will try to get it for you -- may be some guide. Your productivity per well, of which your cost, of course, is a function, in Canada is roughly 75 barrels per day per well, and in Venezuela it is closer to 250 barrels per day per well, and in the Middle East it will be several thousand, probably close to 4,000 barrels per day per well.

MR. PATTILLO: That isn't really helping me because ---

MR. ASH: I don't have the lifting cost figures, sir, I am sorry.

MR. PATTILLO: Have you or anybody in your company ever given any thought to what the situation may be when the St. Lawrence Seaway is opened up as to the feasibility of moving Middle East crude or







Venezuelan crude right into Lake Ontario?

MR. ASH: I will turn it over to Mr. Ritchie, sir; but the average depth of big tankers, which would be an economic way to move such crude, is greater than the Seaway can accommodate.

MR. PATTILLO: You have apparently looked into it that much, Mr. Ash. What is the average depth of the big tanker, loaded?

MR. RITCHIE: Mr. Pattillo, the St. Lawrence River system up to Montreal has a channel of 35 feet below datum. At this time of year you generally have high water and there may be 5 feet above datum, so the net channel would be 40 feet. But if you were to bring large tankers in they would have to be lightered even up to Montreal. The largest ship that we have brought into Montreal was a 32,000-ton ship. The draft of that was 34 feet 9 inches fully loaded in salt water carrying Kuwait crude. When it arrived in fresh water, taking into account the bunkers that had been used in the meantime, it was 34 feet 9 inches, fresh water. You need at least 3 feet between the vessel and the channel for squat and for safety, so this ship of 32,000 tons, without lighterage, would have required a channel depth of about 38 feet. This ship was lightered. Going through the canal system, the canal may possibly have a maximum capacity of 27 feet. I think you can readily understand that to take ships for a long distance, even though





they are specially built ships with minimum draft, would not be economical.

MR. PATTILLO: What about your T.2 tankers which you are using at the present time? What is their draft?

MR. RITCHIE: T.2 tankers fully loaded in salt water have a draft of 30 feet 2 inches. Again, if we operate the T.2's in a much shorter movement the amount of bunkers used is not as great; so it would arrive in fresh water with a draft in excess of the draft it started with at Montreal, with a draft of 30 feet 9 inches, and they could not, of course, be used in the St. Lawrence Seaway system.

MR. PATTILLO: Do you agree with me, Mr. Ritchie, that if the finding, development and lifting cost of Venezuelan crude is the figure of 40¢ that was given to us the other day, and if tank prices remained as they are now where you can get long-term charters of U.S.M.C. minus 55, you would be able to put Venezuelan crude into Ontario at Clarkson or Bronte where you may be going to build your refinery at a cost less than Canadian crude moved from Alberta to Port Credit?

MR. RITCHIE: The inference that you are suggesting that with a lifting cost of 40¢ and transportation, the way to put it in would be correct if you didn't look at any other factors, Mr. Pattillo. But I think we established this morning





we are buying crude at the f.o.b. price of \$2.79.

MR. PATTILLO: Well, if you look at the Shell organization as one big organization, you agree with me that is merely a bookkeeping entry?

MR. RITCHIE: No, sir, I am afraid I have to differ with you. If you want to look at Venezuela or Creole or anybody else there and say that they are making exorbitant profits, then obviously you are at liberty to do so; but the lifting cost is one thing and the cost that we pay is something entirely different. There are substantial royalties, for instance, that have to be paid plus all the other items. I can assure you that that is paying the normal f.o.b. price. Perhaps there may be a reasonable profit in whatever company is operating in Venezuela, but from the standpoint, I would think it would be uneconomic to move Venezuelan crude into the Montreal area with the St. Lawrence Seaway system even if we were contemplating doing such a thing, and we have no idea of so doing. We are intending to build a refinery at Bronte and are intending to use Alberta or Saskatchewan crudes.

MR. PATTILLO: Then you would say, as you see the problem, that you don't think that Canadian oil landed in Toronto may fear the threat of competition from Venezuelan or Middle East oil put there?

MR. ASH: Yes, sir, that is what we say.







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MR. PATTILLO: Now, arising out of something you said, Mr. Ritchie, I would like to canvass a few minutes this posted price and see what it really means. Is the Venezuelan posted price that you have just told us about in any way related to any other posted price in the world, and if so, to what posted price?

MR. RITCHIE: It is my impression that the Venezuelan posted price bears a relationship with the U.S. Gulf prices, taking into account competitive transportation and U.S. tariff.





MR. PATTILLO: Let me see if I follow this: the Venezuela price, posted, if you add the cost of transportation and U.S. duty, you would find that it should be competitive with the U.S. posted price at the Gulf, laid down where, in each case?

MR. RITCHIE: The East Coast.

MR. PATTILLO: And the East Coast: what do you mean? Portland?

MR. RITCHIE: No, I am talking about the east coast of the United States. Portland does not happen to be a refining area.

MR. PATTILLO: Which place are you talking about when you say this is laid down at the East Coast?

MR. RITCHIE: New York harbour is an East Coast area.

MR. PATTILLO: Now, when we have the Mid-East posted price that you have told us about, what is it related to?

MR. RITCHIE: Mr. Pattillo, all crudes throughout the world are related to being competitive in a world situation.

MR. PATTILLO: I haven't any doubt about that, Mr. Ritchie. I just want to find out where this posted price in the Mid-East -- what it is related to and where the point is.

MR. RITCHIE: That is something I really cannot answer specifically, I regret.





MR. ASH: May I have a shot at it, Mr. Pattillo?

MR. PATTILLO: Yes, please.

MR. ASH: I think it would be a fair statement to say that the posted price in crude oil in the Near East wellhead is geared, again, to competing with the American related price in those markets which Near East oil has logically entered, and one of the big ones, of course, would be the United Kingdom and the European markets.

MR. PATTILLO: It would not be related to the competitive price of U.S. Gulf oil in New York harbour but, more comparably, with U.S. Gulf shipped to Great Britain?

MR. ASH: That is the major market.

MR. PATTILLO: Now, Mr. Ash, from your experience in the oil business, how do you get at this original posted price, this U.S. Gulf price? It does not bear any relation at all to the cost of finding and developing, does it?

MR. ASH: It has relation to the markets in which it tries to compete. You might say the same process, in reverse, if you were describing Venezuela and Middle East oil.

MR. PATTILLO: It is a question of which comes first, the chicken or the egg?

MR. ASH: It is a question of trying to get the market.







MR. PATTILLO: Well, I put this to you, Mr. Ash: in your opinion, from your years of experience in the oil business, would the pro rationing policy followed in Texas have any effect on the posted price of oil in the Gulf?

MR. ASH: I would say the competition is the main factor affecting the posted price at the wellhead anywhere, in any State.

MR. PATTILLO: Competition where?

MR. ASH: Between producers trying to find markets.

MR. PATTILLO: Well, does that still follow here in Canada, for instance, in the Province of Alberta, where we have a posted price for Redwater?

MR. ASH: I think Alberta is an excellent example, sir. The oil of Alberta, generally speaking, is worth several cents less, perhaps as much as 40¢ less per barrel, than comparable crudes in the United States, and it is competition to obtain markets in land-locked Alberta which causes this. It is not related to the pro rationing policy of the Alberta Government.

MR. PATTILLO: You say neither Texas nor Alberta would have any effect whatever on their posted prices?

MR. ASH: I say it was competition which would create those prices.

Mr. Kartzke has pointed out something





which I am sure you understood, that these oils, of course, are competitive in terms of the yield of products which they provide at the refineries where they are eventually refined.

MR. PATTILLO: Yes. Now, I have been getting some information regarding the situation on the East Coast. Let us go, for a moment, to the West Coast.

As I understand it, this refinery of Shell's at Washington has been presently bringing in, by tanker, Californian oil to the extent of about two to one as against oil from Alberta. Is that right?

MR. ASH: As of today, that is correct, sir, yes.

MR. PATTILLO: Now, what is the posted price for the Californian oil and where is the well-head where that price is posted?

MR. ASH: I am afraid I will have to get that information for you, sir. I do not have that in my head.

MR. PATTILLO: Does Mr. Kartzke know that? Do you know what it is costing to deliver, not only the posted price, but the transportation, to deliver that Californian oil to the refinery?

MR. ASH: I can get that for you, sir, but I do not have it.

MR. PATTILLO: Will you please get that





Information?

MR. ASH: Yes, sir.

MR. PATTILLO: Could you answer this question, Mr. Ash: which is costing less, delivered at the refinery today: Canadian oil or the Californian oil?

MR. ASH: May I turn this one over to Ritchie, sir? He has the figure.

MR. RITCHIE: The Canadian oil would cost less than the Californian oil.

MR. PATTILLO: Then, Mr. Ash, if it is all a matter of competition, why is the Californian oil going in there and the Canadian oil staying out?

MR. ASH: Chiefly because of heavy inventory positions, which, I might say, are gradually coming to an end.

MR. PATTILLO: I am afraid I don't follow you. If you are bringing in so much in there, 30,000 barrels a day, why should you be taking in, from Californian production, twice as much as your cheaper Canadian product?

MR. ASH: Heavy crude inventories in California.

MR. PATTILLO: On Shell?

MR. ASH: On Shell and Shell-purchased oil.

MR. PATTILLO: So it is a case of owner-shipped oil, which might cost more on a bookkeeping







entry, taking posted price, having precedence over Canadian oil, which has a posted price of less, because, in fact, the cost to Shell of the American oil is less?

MR. ASH: It is partly a matter of commercial relationships, sir. This is out of my own company and I am talking from my knowledge of what the American company have told me, but I know, for instance, in California, due to the temporary supply situation of crude oil, our company was faced with cutting off, cancelling contracts with crude suppliers, many of them people with whom we had a relationship for twenty-five years, and that is a relationship that you do not, even from a commercial standpoint, sir, break off lightly. You want to keep those people for the future; we have a future to think of, and, to a certain extent, the position at Anacortes was dictated by that.

I believe Ritchie would like to say a word on this subject, also.

MR. PATTILLO: Thank you.

MR. RITCHIE: Mr. Pattillo, when Mr. Ash suggested that, partially, the difficulty is due to the inventory position, it is not only inventory position on crude but inventory position on products, and Shell had the alternative of running some of this California crude in their refineries in both the Los Angeles basin and at Martinez and





shutting back Anacortes or, alternatively, moving the California crude up to Anacortes and having capacity in the California refineries. Now, from the standpoint of strict economics, it would be, perhaps, better, transportation-wise, to refine the California crudes in the California refineries and set back Anacortes; but Anacortes was the newest refinery and they, for their own good reasons, wanted to run it at entire capacity, and whether you ship crude or ship products you are still shipping material into the Northwest. They chose to ship California crude, on a temporary basis, to Anacortes.

MR. PATTILLO: Now, Mr. Ritchie, have you what it would cost, with tanker rates as they now are, to put Canadian crude into your San Francisco Bay refinery?

MR. RITCHIE: No, sir, I haven't got that information. That movement is not going on at the present time. As a matter of fact, we have not been supplied, even when there was an emergency, we were supplying oil from Anacortes, but we were not running our California plants with Canadian crude.





MR. PATTILLO: Is your San Francisco refinery operating solely on California crude?

MR. RITCHIE: To the best of my knowledge, it is.

MR. PATTILLO: Do you know what the posted price of California crude is?

MR. RITCHIE: There are a large variety of California crudes and the prices are a matter of public knowledge. I cannot tell you specifically either the exact crudes or the posted prices.

MR. PATTILLO: What I was getting at was this: Mr. Morrison of Trans Mountain told us the other day, if I recollect his evidence correctly, we could put Canadian crude over the Trans Mountain system and send it up by tanker from Vancouver and that you could put it into the San Francisco Bay area in competition and, in fact, under Venezuelan crude and I was wondering whether you could make any comment as to whether you could put it in under California crude? Would you get that information for me if you have not got it?

MR. RITCHIE: There is no water tariff transportation required to move California crude.

MR. PATTILLO: I suppose it is moved by pipeline.

MR. RITCHIE: That is right.

MR. PATTILLO: I would like to know what the California crude moved by pipeline into your







San Francisco Bay refinery is costing and I want to see how that would compare with Canadian oil moved over the Trans Mountain and then sent by tanker from Vancouver to the Bay. Am I correct in thinking that the California production is not adequate to meet the demand of the refineries in the California area and that there must be importation of crude oil?

MR. RITCHIE: That is right, sir.

MR. PATTILLO: Well, does Shell not import any oil into California; any crude?

MR. RITCHIE: If by importing any oil you mean any other than indigenous domestic?

MR. PATTILLO: Is Shell able to get all of its requirements --?

MR. RITCHIE: From domestic US production?

MR. PATTILLO: From California production, first?

MR. RITCHIE: There is the Four Corners area which was discussed this morning.

MR. PATTILLO: It is coming on-stream for the California refineries.

MR. RITCHIE: That is right. When that pipeline was first projected it was thought that with the indicated total demand for California, taking into account the indicated probable production in the future, but not only would the Four Corners crude be so utilized as a domestic crude





but there was still a substantial deficiency of imported crude required to balance out.

MR. PATTILLO: Is it this Four Corners crude which has just recently been posted at 3.31 at the wellhead?

MR. RITCHIE: I am afraid I cannot tell you what the wellhead price of Four Corners is.

MR. PATTILLO: Will you get that, please?

MR. RITCHIE: Yes. You see, what I am after, according to what Mr. Morrison told us there must be a substantial market in the western part of the United States that Canadian crude could supply if it was solely a matter of price and I want to find out, if this competition that you are talking about is the sole factor, why it is not being supplied by Canadian crude. Is there anything you can tell us to help us in that connection?

MR. ASH: I can only say this: California, according to our calculations and we can give you the figures, in the long term is inevitably going to be a net importer of crude oil. In the immediate short term, she has not been in the position of having to be a net importer; she has actually had an excess of supply over demand. We have some figures here of how we see the future importations not only in California; I think we have the rest of the United States also.

MR. PATTILLO: We would be very interested





to get those if you would give them.

MR. ASH: We have them for District 5.

MR. PATTILLO: That is the westward district. If you will give us those figures --.

MR. ASH: We start with 1957 as the last year in which we have complete statistics.

MR. PATTILLO: All right.

MR. ASH: The total District 5 domestic demand was in barrels per day, 1,117,000. There was an export demand of 129,000 making a total demand of 1,246,000. Production of crude, 931,000; these are in barrels per day, plus liquid production of 80,000 barrels per day giving a domestic supply in total of 1,011,000 barrels a day. Now, this was balanced out by imports of products from other areas, 58,000 barrels a day and crude, 5,000 barrels a day plus an import of crude of 260,000 barrels a day resulting in a total supply of 1,344,000 barrels per day with a stock change of plus 98,000 barrels per day build-up. That is the inventory situation that we are talking about that had to be rectified.

MR. PATTILLO: Have you any information as to the source of this importation that you have just given us or whence it came?

MR. FRAWLEY: I would like to get a figure, Mr. Ritchie: did you say 98,000 total build-up?







MR. RITCHIE: But the supply was in excess of the demand throughout the year.

MR. PATTILLO: Can you tell me where this crude of over 310,000 barrels a day was coming from that was being imported?

MR. RITCHIE: Yes. The California area in 1957 supplied 39,000 barrels a day; the Middle East supplied 61,000 barrels a day; the Far East supplied 65,000 barrels a day; Canada supplied 95,000 barrels a day for a total of 260,000 barrels a day which was the imported figure.

MR. PATTILLO: Now, Mr. Ash, up until very recently you were a director, were you not, of Trans Mountain Pipe Line?

MR. ASH: Yes, sir.

MR. PATTILLO: For how long?

MR. ASH: Almost from its inception and until two months ago.

MR. PATTILLO: Ever since the market for Canadian crude began to flop off in July, 1957, did you, at any time up to now, go to the Shell interests in the United States to see whether you could persuade them to increase the amount of Canadian crude that was being imported by them in District 5?

MR. ASH: Not only at any time but a great many times; you might almost say every hour on the hour.





MR. PATTILLO: Have you ever suggested to them that if it was solely a matter of price, if the Trans Mountain line could be built to capacity there would be a substantial reduction in the tariffs of that company and still enable it to operate at a profit?

MR. ASH: Sir, I think they are well aware of that. I think you ought to remember we have a very substantial investment in Trans Mountain Pipe Line and we have an even more substantial, from our standpoint, I think it is 100%, that Shell has invested in the Anacortes refinery. That refinery was deliberately located so it could take oil from the Trans Mountain Pipe Line on long terms. It was located and designed to use Canadian oil exclusively. There has been a temporary situation which is coming to an end when it became necessary, for the reason that Ritchie and I have tried to explain to you, for our California company to use its own oil to the maximum. I believe by next month we shall be doubling the quantity of Canadian oil they take into Anacortes over today and that will steadily increase from then on.

MR. PATTILLO: Until, eventually, they get back to the place where they will be using exclusive Canadian.

MR. ASH: That is the basis on which it was built.





MR. PATTILLO: Have you ever, you or any of the officials of the Shell organization, given any consideration to which would be the greater advantage to the Shell organization: and that is, refineries in District 5 increase the take of Canadian crude or that there be no increase there but that Shell take Canadian crude at Montreal.

MR. ASH: Yes, sir, that is something we have certainly looked at. I think they regard the Puget Sound area as a natural area within the Shell economy in which the greatest promise for the use of Canadian crude exists.

MR. PATTILLO: Supposing the Government of Canada went to the Shell Company and said, "We have got to increase the market for Canadian crude in Alberta and we will do it by way of an embargo shutting out all Middle East and Venezuelan crude and putting a pipeline into Montreal unless you or your associate companies in North America can offer a market for Canadian crude greater than which you are offering today." Has that possibility ever occurred to you?

MR. ASH: That is a strictly hypothetical question, sir. I suppose I can say that probably it has not occurred to me in exactly that form.

MR. PATTILLO: You have heard the proposition that the Home Oil Company are putting up about a pipeline to Montreal.







MR. ASH: Yes, sir.

MR. PATTILLO: I would gather from what you have said in your brief and from the information that Mr. Ritchie has given to me, from a strictly economic point of view that is the last thing in the world Shell would want to have happen, and it would be required to go on-stream at Montreal of Canadian crude.

MR. ASH: Yes, sir. I think not only the last thing we would want but I think it is bad for our overall industry.

MR. PATTILLO: I think you would also agree that the only way in which Canadian crude could be put into Montreal, in the figures that have been given to us by Mr. Ritchie, is by some governmental authority requiring you to take it in quota or in total.

MR. ASH: The only way?

MR. PATTILLO: Yes.

MR. ASH: Probably, yes.

MR. PATTILLO: I think it would be fair to say this, would it not, Mr. Ash: if you were approached tomorrow as a refiner in Montreal and asked to voluntarily sign a throughput agreement for a portion of this 150,000 barrels that Mr. Ratcliffe says would be required, you would not be prepared to sign that voluntarily.

MR. ASH: We would not be.





MR. PATTILLO: So there is only one way that I can see that Shell would sign it and that would be that they would have no other alternative.

MR. ASH: Yes, sir; that is just about right.

MR. PATTILLO: I want to see if we can get a solution to this problem. Mr. Brown, the president of Home Oil, told me the big problem was the Latin market for Alberta crude. Now, if we examine that first as being the only problem, I am not saying it is but let us assume it is the only problem, you, as president of Shell Oil Company of Canada had it put up to you that you would have to make a contribution to that problem either by taking Canadian crude at Montreal or getting members of the Shell organization to take it somewhere in North America, which method would you first attempt?

MR. ASH: I would certainly first attempt to increase our take in the Puget Sound area as I have already said.

MR. PATTILLO: Would that Puget Sound area be extended as far as San Francisco Bay?

MR. ASH: As of now, I doubt it, sir.

MR. PATTILLO: Do you think it could be in the immediate future?

MR. ASH: Not in the immediate future.

MR. PATTILLO: Mr. Ratcliffe said this morning he would anticipate it would take three





years from now to build a pipeline into Montreal. Do you think, from your knowledge of the situation, that within the next three years you might be able to have this substantial quantity of Canadian oil put into the San Francisco Bay area?

MR. ASH: No, sir. I think it is virtually within that three-year period that it is almost certain that Anacortes would be buying 100% Canadian crude oil.

MR. PATTILLO: And their capacity is 50,000 barrels a day.

MR. ASH: As of today but the net will increase in the future. I appreciate, Mr. Pattillo, that within that three-year period the Montreal refinery construction that we refer to in our brief will be materializing.







MR. PATTILLO: I was going to ask whether you can give me any help on this. Within the next 3 years what will be the increased capacity of refineries building or coming back on Canadian crude that are being or could be serviced by Trans Mountain? What could we reasonably expect will be the increase in market through Trans Mountain at that time?

MR. ASH: I think those figures that Mr. Ritchie has are the best answer to that, sir.

MR. RITCHIE: According to our estimates, by 1961 it would be 125,000 barrels run in the Puget Sound area of Canadian crude which would increase steadily over the years; it would be up by 1962 to 160,000 barrels.

MR. PATTILLO: In 1961 you think it would be 125,00 barrels per day in the Puget Sound area?

MR. RITCHIE: Yes, sir.

MR. PATTILLO: What will be the situation -- have you any figures as to what would be the refining capacity in the Vancouver area at that time?

MR. RITCHIE: In the Vancouver area?

MR. PATTILLO: Yes.

MR. RITCHIE: No. I would think in the order of 100,000 barrels.

MR. PATTILLO: So that you think that the Trans Mountain pipeline would be operating at its present full capacity in 1961?





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MR. RITCHIE: I didn't say that because you had 100,000 barrels in British Columbia it would necessarily require 100,000 barrels capacity crude. Does that answer your question?

MR. PATILLO: No. I am trying to get at what the market increase may be if there isn't any pipeline to Montreal.

MR. RITCHIE: I would think, sir, it would be certainly within about 10 per cent of that figure, say, 90,000 barrels, plus the refining capacity at Kamloops.

MR. PATILLO: Now, that would mean, then, about 215,000 barrels a day by 1961 going through the Trans Mountain system; is that it?

MR. RITCHIE: In that order, I would think.

MR. PATILLO: Can you give us any help as to what you anticipate by 1961 the situation is going to be in Ontario as opposed to today?

MR. RITCHIE: I am afraid I don't have those figures, sir.

MR. PATILLO: And could you get them for us?

MR. RITCHIE: I can only get them in collaboration with the other refiners in Ontario. You appreciate that it is fairly readily available to the industry what the existing refining capacities normally are at present. Over and above that, the companies table from time to time contracts which





they have let in indicated increased capacities; but other than the indicated refinery capacity, say, 2 years hence, anything further is simply a conjecture, and you would have to know individual companies' thinking to be able to put together a correct statement of what the capacity may be.

MR. ASH: We do have some figures, sir, and we will be glad to let you have them.

MR. PATTILLO: Have you got those figures?

MR. ASH: No, we have to send them into you; I don't have them.

MR. PATTILLO: Now, Mr. Ash, Mr. Brown, president of Home Oil, has said that if Canadian crude was piped into Montreal at a laid down cost of \$3.16 per barrel he would not anticipate that there would be any increase to the consumer of the finished products because the finished products price was based on the price of import of finished products from the U.S. with tariff added. What do you say as to that?

MR. RITCHIE: May I answer that question, Mr. Pattillo?

MR. PATTILLO: Yes.

MR. RITCHIE: In the first place, \$3.16, the laid down cost for crude, leaves out some factors which we feel are quite relevant. Prior to seeing the table of 51.8¢ as a tariff item to Montreal, we had in our own calculations assumed 60¢ per barrel







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tariff; not that we thought necessarily 60¢ was feasible, but we put it in low enough so that we felt there would be no question of having a tariff which was indicated on the high side. Using 60¢, we have a laid down cost of \$3.34 instead of \$3.16. Now, the other area of difference is that we have a substantial investment in the Portland pipeline and that pipeline facility has a substantial debt outstanding, and in one case when you are putting crude through the line and there is cash generated as a result of that throughput, in other words, the 12 1/2¢ I mentioned this morning which includes pipeline tariff with loss allowance, results in retained cash in the company. Now, that cash pays back the interest on the indebtedness. On the other hand, if you put a pipeline through to Montreal and do not utilize the Portland pipeline, the very best case, as far as trying to rationalize the Montreal line for a barrel of crude, would be one of entirely shutting down the Portland facility and operating it at a minimum throughput. If you operate at a minimum throughput, as has been suggested, they would have a very substantial cost per barrel and the absorption would be more than if they had actually shut down the line and only paid the indebtedness off. On the other hand, putting crude through from Portland to Montreal and on the other hand to shut it down is an item of 9¢ per barrel, which includes





a charge for the large capital cost of the rather substantial volume of crude which would be necessary in the system from Edmonton through to Montreal, the interest thereon. That charge would be a charge that is not in the Portland-Montreal system.

MR. PATTILLO: That is the line fill you are talking about?

MR. RITCHIE: That is the line fill, and the interest on that is certainly an appropriate charge. Taking those two items into account, we conservatively came up with a 7 1/2¢ per barrel figure. So we would say that a barrel of crude lays down at \$3.34 Canadian.

MR. PATTILLO: Rather than the price that Mr. Brown mentioned. Now, would you just address your mind to this question that I ask. Mr. Brown said that he would not anticipate that the Canadian crude being put into Montreal would result in a higher price to the consumer. It might shorten the profits of the refiners, but he didn't think it would result in any higher price to the consumer because the price of the products was based on the U.S. product imported after tariff, in any event. What do you wish to say about that remark?

MR. RITCHIE: Well, this morning we tabled that Mesa crude would lay down at 7 3/4¢ Canadian as against this cost figure of \$3.34. If you would not disagree with the laid down cost,





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then I think it goes without saying that either  
the oil companies are making too high a profit now  
or you would have to have some adjustment in your  
product prices.







MR. PATTILLO: Have you looked into this, Mr. Ritchie: supposing that you were required to use Canadian oil at Montreal but there was no restriction on what type of oil the refineries in the Maritimes used. On your price of 3.34 that you have worked out there, would the Maritimes refinery, buying Middle East oil and refining it, be able to undersell the Montreal refinery in the Montreal area?

MR. RITCHIE: There is no question about it. As a matter of fact, before lunch we were on the subject of direct importations into the Montreal area from the Mid East, but I do not think we came up with any final figures. Are you interested in these?

MR. PATTILLO: Oh, yes.

MR. RITCHIE: Well, taking 1.85, if you take U.S.M.C. minus 40, again, the rate is 2.99 9/10s cents. If you can accept that you could get minus 50, considering the extremely long haul and the amount of transportation that is in that 2.99, the figure becomes 2.82 4/10s cents.

Now, I am sorry. That 2.82 4/10s and the 2.99 was the laid down cost through the Kuwait-Portland system but, if you come direct from Kuwait to Montreal and do not go through the Portland system and you had a rate of minus 50, it would lay down at 2.74 Canadian at Montreal.





So if we accept 3.34 as a reasonable cost of Redwater crude, laid into Montreal, then you are talking about a direct movement at U.S.M.C. minus 50 into Montreal with a 60¢ differential.

I am not suggesting this is a sufficiently correct differential to use the year round. I am suggesting that, under present conditions, you can lay it down for substantially less than this during the open season but, if you talk about Halifax or some open port in the Maritimes and can conceive of Kuwait coming in direct, the year round, I am sure you will see that Kuwait crude would lay down substantially cheaper than Alberta crude in Montreal, and you can understand that there would be an easy entry by those refineries into the existing Montreal market.

MR. PATTILLO: A Golden Age for the Maritimes.

MR. ASH: Yes, sir.

MR. PATTILLO: Perhaps we might have a break now.

THE CHAIRMAN: It will be the first break the Maritimes ever had.

We will have a ten-minute break.

---A short recess.

THE CHAIRMAN: Gentlemen, the Commission will resume its hearing. Mr. Pattillo?





MR. PATTILLO: Thank you, Mr. Chairman.

Mr. Ritchie, this \$3.34 at Montreal: that is, is it not, a cost figure to Shell, but take a refinery in Montreal, such as Petrofina, that has not got any financial interest in this Montreal-Portland pipeline -- if it has; I don't think it has.

MR. RITCHIE: They have, sir.

MR. PATTILLO: Oh, have they? Well, is there any refinery in Montreal that you have not got tangled up in this Portland line?

MR. RITCHIE: Sir, there is no economic way of moving crude through the closed season unless you do bring it in through the Portland-Montreal system.

MR. PATTILLO: That is by water. But I am trying to get at the situation of Canadian crude and this price of \$3.34. I appreciate that if you people have an investment in a pipeline or in some wharves or things like that that become obsolete, you have to write it off, and you write it off over a period of time and consider that so much of an increase in your costs. But if you were not doing that, if you paid no regard to the loss in your investment in present facilities, and looking at Mr. Brown's figure alone, which some new refinery going in there could do, again let us get at this question which I have asked you twice now and I really have not got an answer to yet.







Mr. Brown says that what will govern the price to the consumer is the import cost of products from the United States, after paying the duty, and that is exactly what is governing the price today.

Now, do you agree with that?

MR. RITCHIE: Yes, I agree that the price of products and particularly gas lines, is geared to the cost of the raw material plus the cost of refining it.

MR. PATTILLO: No, that is not my question at all, now. I will try and put it in very clear language:

Is the price of the product to the consumer in the Montreal market today based on the import price of that product?

MR. RITCHIE: Based on the import price of the product?

MR. PATTILLO: Yes.

MR. RITCHIE: No, sir.

MR. PATTILLO: Does it ---

MR. RITCHIE: I am talking about gasoline, now.

MR. PATTILLO: Well, what I am talking about is this ---

MR. RITCHIE: Well, may I clarify my point, sir, because I have already developed, this morning, that as far as Shell -- and we are not unique -- there is a net importing requirement in





the Eastern Canadian situation to balance out our heating oils. Now, as long as you have substantial volumes coming into Eastern Canada which are required -- because, even though we run 30 gravity crude and run the refinery to meet the maximum distillate -- after you have run your refinery to meet the gasoline market you cannot produce any more heating oils and, as long as you are a substantial importer, your product prices cannot be too far out of line from the import cost; but we are not a net importer, certainly in the Montreal refining area, of gasoline.

MR. PATTILLO: Well, we will try to get back at this thing, again: supposing that I am in the importing business, I am not a refiner but solely in the importing business -- and I think that is the case with Irving Oil Company, isn't it?

MR. RITCHIE: Except that Irving Oil Company, largely, is not in the Montreal refining orbit.

MR. PATTILLO: Well, I have seen a lot of its gas stations around Quebec City, and you people ship into Quebec City from the Montreal refining area?

MR. RITCHIE: Yes.

MR. PATTILLO: Do you agree with me that Irving Oil is an importer?

MR. RITCHIE: They are.

MR. PATTILLO: Well, then, I want to get at this again: they sell a lot of gasoline, don't





they, to the consumer?

MR. RITCHIE: They have a good market.

MR. PATTILLO: And they are selling in competition with you and Imperial Oil and others in the area of Quebec and in the Province of New Brunswick, etcetera?

MR. RITCHIE: They do not sell in competition with us in the Province of New Brunswick. We do not market there.

MR. PATTILLO: Well, that is the only reason. If you did, they would.

Now, let us get back to what Mr. Brown told us here, and I want an answer to this question, "yes" or "no".

Mr. Brown says that the price paid to the Canadian producer at Montreal will not affect the price paid by the consumer for the finished product, because the finished product is now based and will continue to be based on the price that would be paid for the imported product, with duty.

Do you agree or not?

MR. RITCHIE: I am afraid, sir, I will have to break this up into gasoline and fuels; and, on the question of gasoline, I don't agree. I thought I made that point clear.

MR. PATTILLO: On the question of fuels, you do agree?

MR. RITCHIE: As long as there is a large







importing element, there certainly will have to be competitive factors.

MR. PATTILLO: Let me ask you this question: can a person today, in the areas served by the Montreal refineries, import gasoline and compete with the Montreal refiner?

MR. RITCHIE: Mr. Pattillo, I want to be very careful in what I say so that the wrong inference is not gained by the Commission.

At the moment, as you are undoubtedly aware, there is a distress situation in the industry, particularly in the United States, so that there are very low product prices and, as a matter of fact, the refiners there have little margin whatsoever between the cost of raw material and operating and what they get for their finished product, so to answer your question specifically, a refiner might, today, buy gasoline and move it into Montreal and have a good operating margin.

It is certainly my impression that, over the years, he would find it very uneconomic to bring gasoline into the Montreal market.





MR. PATTILLO: There is a difference between Redwater crude and Venezuelan crude, is there not?

MR. RITCHIE: There are several differences.

MR. PATTILLO: I am thinking of the gravity. You told us all your Venezuelan crude --

MR. RITCHIE: Yes, there is a difference in gravity.

MR. PATTILLO: When you are talking about \$3.34 for Redwater as opposed to, I think it was, \$3.07 for Venezuelan; if you make the adjustment what would be the true differential between the two prices; that is, if the two prices are due to gravity differences?

MR. RITCHIE: Are you talking about an industry or do you mean the market you have to serve?

MR. PATTILLO: That is what I am talking about, the latter.

MR. RITCHIE: I have already indicated that we in Shell, at least, are running our refinery products, gasoline refinement, and with that we are a net importer of heating oils. Now, we are purposely running 30-31 gravity crudes because they most nearly meet the market requirement. If we ran a lighter crude we would meet our market requirement running less crude to meet the same gasoline demand and instead of bringing in the products we are bringing, importing, we would have to import additional products. Roughly, for every 1000 barrels of light stream crude that Interprovincial has, that is normal crude that goes to Ontario for a thousand





barrels of that type of crude that we would run, we would take out about 1,170 barrels of the type of crude we are currently running. In other words, to make the same number of barrels of gasoline we will run less crude which means we have to import more products.

MR. PATTILLO: Not with this natural gas coming in and taking the market from you anyway.

MR. RITCHIE: Sir, it is true, and I think we developed this in our brief, that the percentage increase of heating oils are levelling off. Nevertheless, there are still substantial quantities of fuels required simply because we live in a relatively cold country and the gasoline market is not sufficient running your refinery in a normal way, even running it at maximum, to produce as an industry all the gasoline so that we would be safe with bringing in additional heating oils. Now, when you bring in those heating oils you bring them in at a cost, paying some other refiners a profit. In normal times, I am not talking about at the moment when there may be a depressed market, but in normal times you would pay a substantial excess for those fuels over and above what the fuels would cost to produce out of your own crude. We would agree that there is a quality differential between running light crude and 30 degree crude and if you are a refiner and can use that crude you should normally be expected to pay that differential.







if we had to pay a differential over and above the 30 gravity crude. As a matter of fact, for your information, we were asked just the other day if we would take crude with an average gravity of 1 degree higher and pay the recognized percent for Venezuelan crude and we turned it down. It would not meet our situation.

MR. PATTILLO: I think that is the information I am seeking. Thank you.

Mr. Ritchie, have you made any study on the aggregate amount of products that are coming into Canada today and have you sought to determine what proportion of those products are being brought in for the same reason that Shell is bringing in this heating fuel?

MR. RITCHIE: My impression is that there is about 100,000 barrels a day. It would seem that if any refinery had any spare fuel to sell that it would be sold and, in fact, the material would not be brought in. To the best of my knowledge there is no refiner who has trouble disposing of his stocks of Shell providing he is competitive with the import fuel costs.

MR. PATTILLO: That is not just what I meant, Mr. Ritchie. What I had in mind, you told me that Shell is bringing in a product because it has run its crude to get certain results and it needs to round out its line. Now, there must be





others who are not in the refinery business at all but are, nevertheless, in the importing business of products. I am trying to find out what volume of these daily imports are coming in to supply strict importers, if you know, and what volume is coming in to round out a line of a refiner.

MR. RITCHIE: I am afraid I cannot differentiate between what you call a strict importer and a refiner.

MR. PATTILLO: A non-refiner.

MR. RITCHIE: A non-refiner, a shipper who has no terminals and who brings it in direct as against the refiner.

MR. PATTILLO: That is correct.

MR. RITCHIE: I do not have that.

MR. ASH: May I make a point, Mr. Pattillo, as we are passing here. Fundamentally it is still whether the importer is a refiner or whether he is, for instance, a coal merchant who has gone into the fuel oil business, as many of them have. As was mentioned, the industry is out of balance in meeting the gasoline demand and has to bring the fuel oil in. But, as you readily point out, there will be an increase of natural gas used and an increase of aviation gas supplied.

MR. PATTILLO: Let me get this: supposing the Government of Canada did put an embargo on crude coming into Canada, do I understand it, then, if you





people continue to have the demand for gasoline that you have today you still would have to import products to round out the line.

MR. RITCHIE: I thought I had established, sir, we would have to import more

MR. PATTILLO: Mr. Ash, would you or Mr. Kartzke please put on the record for me your views on pro rationing. I want to know whether you can have proper conservation methods without pro rationing as, I understand, is the situation in Saskatchewan today.

MR. ASH: Mr. Pattillo, I wonder if, before we go to that question, I could take the liberty to say one more thing about this expression you use now and again, an embargo on Canadian crude oil going into the eastern refining area. I do not think we should overlook the fact, of course, Canada can if it wishes build a fence around itself and become completely isolationist; produce this in the country, within its own borders and sell it to itself. But the fact is that Canadian oil is part of a total world supply and demand picture. Now, if you shut off by the embargo, using your own word, 250,000 barrels a day of foreign oil going into Montreal that oil has got to find a resting place and I do not say where that will be but --.

MR. PATTILLO: Perhaps it would be in the ground like the Alberta oil.







MR. FRAWLEY: Just like ours.

MR. ASH: Maybe it would be on the West Coast if you contribute to the oversupply situation. I think we have tried to make clear this morning the prices are linked up on a world basis and if you contribute to the oversupply situation you contribute to a weak price situation.

MR. PATTILLO: Is there anything more you would like to add on that subject, Mr. Ash?

MR. ASH: No, sir.

MR. PATTILLO: I would like to have some views on this pro rationing.

MR. KARTZKE: By proper conservation methods, I assume you mean a method whereby there is no physical waste of the oil or gas?

MR. PATTILLO: Yes.

MR. KARTZKE: Yes, I think you can.

MR. PATTILLO: As I understand it, that is what they are doing in Saskatchewan today?

MR. KARTZKE: In Saskatchewan today there is a method by which a maximum producible rate for a well is set on an engineering basis. Presumably, if that rate is not exceeded there will be no physical waste. Therefore, if a producer produces up to that rate, there will be no physical waste and, therefore, pro rationing, as such, is not necessary. I would like to say also, however, pro rationing may be necessary for other reasons.





MR. PATTILLO: Would you first, before you expand those other reasons for which pro rationing is necessary, would you agree with me that pro rationing has, at least, one effect; that is, destroying the initiative of the producer in looking for markets for his oil?

MR. KARTZKE: No, not in all instances.

MR. PATTILLO: Let us put it this way: has it had that effect in Alberta?

MR. KARTZKE: It might in individual cases. By that, I presume, if you are given an allocation of a certain amount and you know there cannot be any more, you would not look for any further markets. That would be true in an individual case but, I think, it is not true in the whole case. I think the whole industry will look for additional markets for oil.

MR. PATTILLO: For instance, in the case of Shell, that is insofar as oil is concerned, it has not been as fortunate in its finds as it has been in gas and the percentage it has in Alberta is somewhere around 3% and, therefore, every time Shell buys oil from Alberta, as I understand it, it only gets 3% of its own oil and it gets 97% of other producers oil for which it is paying posted prices. Does that have a deterrent effect of pushing the sale of Alberta oil?





MR. KARTZKE: Well, again I will have to say that in the individual case of Shell it probably would, where our proportion is a small proportion; but for the industry at a whole, I don't think that is the case.

MR. PATTILL:: Well, the industry as a whole doesn't have any common marketing board or association, does it?

MR. KARTZKE: No, certainly not.

MR. PATTILLO: Now, carrying further on this question of pro rationing, do you think pro rationing in Alberta and no pro rationing in Saskatchewan has any effect on the nominations that may be made each month for oil, for crude?

MR. KARTZKE: Well, it has no effect on the nominations that Shell makes for crude.

MR. PATTILLO: You can't get the Saskatchewan oil to the Trans Mountain and you don't buy any from Interprovincial.

MR. KARTZKE: Yes.

MR. PATTILLO: But as a person in the oil business here in Alberta, you must be able to help us out on this.

MR. KARTZKE: I would prefer that you asked that question of the gentlemen who are going to appear before you on Monday and Tuesday.

MR. PATTILLO: I will do this with your undertaking that if I don't get the answer from







them you will come back and give it to me. You said that there were some advantages about pro rationing. Now, would you please develop them?

MR. KARTZKE: Well, I said there were some necessities for pro rationing. Now, certainly when you restrict a market arbitrarily by a government I think you must make a provision whereby an individual lease-owner or owner of an individual property is protected, and therefore there must be some way to treat everybody in the field or in the fields equitably. In other words, I think you take away the privilege of capture when you install pro rationing; you must put something back in its place. Secondly, by pro rationing you eliminate the possibility of distress oil getting on the market, which is a bad feature. Those are the two principal things I had in mind as necessities for pro rationing.

MR. PATTILLO: You mean it keeps the price of oil up?

MR. KARTZKE: It keeps the price of oil proper.

MR. PATTILLO: Mr. Kartzke, would you expand that and explain what you mean by "proper"?

MR. KARTZKE: Yes, I will be happy to. In Texas, as we know, when there was a great amount of distress oil on the market it was necessary by some people and by some operators to market the





product at away below any price at which even those people could make a profit, and I think that is fundamentally a bad situation.

MR. PATTILLO: Have you any views as to what you would consider a reasonable length of time for pay-out?

MR. KARTZKE: No, not as such. I think every particular circumstance of pay-out would have to be judged on its own merits.

MR. PATTILLO: Can anybody help me here on this? I was trying to get it this morning, but I didn't have very much luck. You do have pro rationing in Texas, and it came in, I believe, for the very reasons you have just said, to stop distress selling. Now, you get a posted price in Texas for oil. That bears no relation, does it, to the cost of finding, developing or lifting?

MR. KARTZKE: Well, I would say in the overall the posted price certainly has to be higher than the cost of finding, developing and lifting the oil.

MR. PATTILLO: But apart from that, that it is more than that, it doesn't bear any relation to the cost. I mean, you just don't take the cost and put on a certain percentage and say there it is.

MR. KARTZKE: No, you couldn't do that in every instance because then you would practically have a posted price at every well, because the cost





of every well is different, and that would be quite an impracticable way of handling and marketing the oil.

MR. PATTILLO: When you get the posted price, is it that price that is really controlling the world price of oil today?

MR. ASH: Would you repeat the question, please?

MR. PATTILLO: Would the reporter read the question?

THE REPORTER: "When you get the posted price, is it that price that is really controlling the world price of oil today?".

MR. ASH: No, sir, it is really the reverse; the posted price is controlled by the world situation. That oil has to compete in the world markets and it is competitive.

MR. PATTILLO: Well, from the information that has been given to us here, Mr. Ash, there is no comparison between the cost of finding, developing and lifting oil in the United States as compared to Venezuela or the Middle East. Venezuela is less and the Middle East is less again. You agree with that?

MR. ASH: Yes, I agree with that.

MR. PATTILLO: And the United States price for finding, developing and lifting is the highest, it is higher than Canada.

MR. ASH: I am afraid I don't know.







MR. PATTILLO: What I am trying to get at is, from your experience in the oil business, which sets the price, the US price or the Middle East price? Which leads the parade?

MR. ASH: The one that leads the parade is the one that goes after the market with a cut price, and he may be a US producer and he may be a Near East producer, depending on the supply situation.

MR. PATTILLO: But he has never been an Alberta producer.

MR. ASH: Yes, he has.

MR. PATTILLO: Where?

MR. ASH: In the Puget Sound area and in California, because the Near East supply was shut off and the Alberta oil became competitive, and they took over markets which were handled by California.

MR. PATTILLO: Why did it not remain competitive?

MR. ASH: I think Alberta oil is competitive with California oil.

MR. PATTILLO: Why is that?

MR. ASH: Partly because of the Suez position California oil had a long situation both in crude oil and in products that had to be worked off.

MR. PATTILLO: The long situation developed during the Suez crisis or afterwards?

MR. ASH: Afterwards.

MR. PATTILLO: If the Canadian oil got in





there during the Suez crisis and got the market, when the Suez Canal opened up again why wasn't Canadian oil able to stay competitive and stay there?

MR. ASH: Canadian oil is still fundamentally competitive in the Puget Sound area. In the California area you have foreign crude oil, Near East oil; the relationship would be something like the relationship that Mr. Ritchie outlined for Near East oil. There would be a differential on paper on Middle East oil.

MR. PATTILLO: Mr. Ash, can you agree that, regardless of price, the Shell organization would always buy, unless there was a substantial economic advantage, its own owner-shipped oil rather than buy pro ration oil in Alberta?

MR. ASH: I think what Shell wants to do is to get its own oil as close to the market as it possibly can. We are investing very heavy sums here in order to supply this market with our own crude oil. Mr. Ritchie has the exact differential.

MR. PATTILLO: Right, thank you.

MR. RITCHIE: Really, Mr. Pattillo, I wanted to speak to your question as to whether Shell would always buy other oil than resident Canadian oil if it was competitive, and the current situation is that we could lay down Middle East oil in Sherbourne and Vancouver. As a matter of fact, with the tanker rates I quoted previously, we could lay it down not only competitively but to our advantage in the posted





price. But to say that Shell would always use its own oil rather than Canadian oil is not correct. I just wanted to make that clear. As a matter of fact, we have been, through the Trans Mountain system, the largest purchasers of Alberta oil, taking into account Anacortes plus our refinery in Vancouver. Over the period we have been the largest purchasers of Alberta oil, and if we were looking just at Shell's own group position, not taking into account anything about Canadian oil, we could have put foreign oil -- by foreign oil I mean other than Canadian oil -- into Anacortes to the net advantage of the group, and we have not done so.

MR. PATTILLO: I asked Mr. Brown this the other day; you may have this information, he didn't have it. Have you ever figured out how much it would cost to put Canadian oil through the Trans Mountain system into Vancouver and then by tanker through the Panama Canal into Portland?

MR. RITCHIE: Yes, sir, we have examined that, and the differential would be so large that it would be quite impracticable, I can assure you.

MR. PATTILLO: Can you give us any figures?

MR. RITCHIE: No, I cannot give you figures. I can work them out. But even on the current distress tanker rates, to go around from Vancouver through the canal and up to Portland would be entirely uneconomical.

MR. PATTILLO: Do you know how much that would

be?







MR. RITCHIE: No. I can assure you that it was over 50¢ a barrel that we were looking at as a differential over Alberta crude. I cannot say categorically what it is.

MR. PATTILLO: We had over 60¢ differential a little while ago, so I thought perhaps we might find it would be just as cheap to bring it through the Trans Mountain system around Panama.

MR. RITCHIE: Mr. Pattillo, if you are back on a theoretical case, we can absorb the 60¢ a barrel and back up Middle East oil with Canadian oil, and whether we can do that is a matter we would have to determine, but I can assure you we haven't looked at it as a rational scheme.

Mr. Pattillo, if I may, I might elaborate on what I said a minute ago so that we will have some figures in the record of what we could do at the moment. We could lay it down at \$2.88 at USMC minus 50, \$2.60 at USMC minus 60, and \$2.55 USMC minus 65; and I submit to you we could have obtained plenty of tankers in the last quarter at minus 65.





MR. PATTILLO: Can you get for me, Mr. Ritchie, what the tanker rate would be, U.S.M.C., from Vancouver to Portland through the Panama Canal?

MR. RITCHIE: Yes, I can get that, but I haven't got it with me. You wish that information?

MR. PATTILLO: Yes, please.

MR. RITCHIE: What rate would I take this percentage off U.S.M.C.?

MR. PATTILLO: I think you should do just as you have been doing now.

MR. RITCHIE: Just give you a table and you can use your . . .

MR. PATTILLO: Mr. Ash, I asked you this morning about this products line from Toronto to Montreal. Supposing (and I quite agree that this has got to be an assumption) that Canadian oil did go into Montreal, would it follow, then, that Canadian oil would have to have an equality with Toronto with transportation laid down price, in order that you could continue to use the products line, bringing your products into Montreal from Ontario?

MR. ASH: No, sir, I don't think so.

MR. PATTILLO: Supposing that ---

MR. ASH: Perhaps I ought to qualify that, sir. You used the word "Toronto". I think what would happen, if, as you are assuming, Canadian oil





went to Montreal, the products pipeline, you might say, would be divided in two, and the Montreal refiners would pump refined products along the line about halfway, and the Toronto refiners would reverse the pipeline and pump towards that meeting point, so that the Canadian oil would serve the economic market.

MR. PATTILLO: What about the thought I was expressing this morning, which horrified you a bit, of converting this products line into a crude oil line and taking Canadian crude into Montreal, with the idea that it would get there more quickly than the 3-year period which has been mentioned? You said that there were some great engineering difficulties.

MR. ASH: No, sir, I did not refer to the engineering difficulties. I think I tried to make it clear that, engineering-wise, it would be feasible, but you would have to satisfy your products movement. I think I could go over the economic disadvantages. That pipeline has been built with a large distribution network around it by the companies involved and other companies for whom they are carrying products and, if the pipeline was carrying crude only, that network would not fit the picture at all. You would have to transport that same volume of refined products by ship to the terminal point, which we gave up when we built the products line. In







effect, we are moving inwards from the lake. In our country, I would estimate we have \$3 million tied up in new terminals and distribution facilities for a pipeline.

MR. PATTILLO: All of which would be scrapped and you would have to ---

MR. ASH: We would have to go back to the lake and get new terminal arrangements and build up again; and that figure is our figure only, not the figure of the other companies.

I can go on, if you like.

MR. PATTILLO: Yes; oh, yes.

MR. ASH: Well, you go back to the situation which we tried to correct with the products line of having a substantial amount of money tied up with tankage inventory, which is one of the main reasons for the line, and the inventory is now carried in the line.

MR. PATTILLO: Mr. Chairman, I think I have, subject to reviewing my notes tonight, asked all the questions I wish to ask on the oil phase of the business, and I was proposing to deal with the gas phase tomorrow; so, perhaps, the Commission would ask any questions they now want to ask and perhaps would agree with me that we divide the matter in two and deal with oil and then later go to gas.

THE CHAIRMAN: Mr. Ash, I would like to get back to this posted price in Texas. I am not





sure the Commission understands exactly how a posted price is arrived at. Can you explain how a posted price is arrived at, in Texas?

MR. ASH: I will try to, sir. The price is posted by the buyer of crude oil and, fundamentally, it is the price at which he can get the quantities of crude that he needs. Therefore, if he is having trouble obtaining crude for refining, he will increase the price.

THE CHAIRMAN: Can you tell me who the principal buyers of crude would be in Texas?

MR. ASH: I think Kartzke could answer that better than me. W do, and the Texas company do; Humble are probably the biggest, Continental, Gulf.

THE CHAIRMAN: Gulf?

MR. ASH: Yes.

THE CHAIRMAN: And Standard, I suppose. Would there be just one posted price?

MR. ASH: Not necessarily.

THE CHAIRMAN: Would all the buyers have the same price?

MR. ASH: Not necessarily.

THE CHAIRMAN: In the same field, you would have different prices?

MR. ASH: There can be. There have been.

THE CHAIRMAN: Is it usual?

MR. ASH: Well, the price tends to stabilize





at the going rate, the rate at which supply can be obtained; but if an oil company is in difficulty it will adjust its price to meet the market.

THE CHAIRMAN: Up or down?

MR. ASH: Up or down, as the case may be.

THE CHAIRMAN: I do not think, as a Commission, we have ever heard of there being more than one posted price in Alberta.

MR. ASH: Yes, I think there has been, sir.

THE CHAIRMAN: It may be a different price, month by month.

MR. ASH: No, a different price at the same time.

THE CHAIRMAN: In the same field?

MR. ASH: I am drawing on memory, sir, but my recollection is that British American, at one time, cut the price.

THE CHAIRMAN: Cut the price?

MR. ASH: That is my recollection, and there are some differences existing now, Mr. Kartzke tells me.

THE CHAIRMAN: Well, let us get back to Texas. Would those buyers be substantially the same interest who would be buying or posting prices in the Middle East?

MR. ASH: I am not sure that I understand your question.

THE CHAIRMAN: I asked you who the







principal buyers would be, therefore, they would be the ones who would be determining the prices which they were prepared to pay in Texas for crude at the wellhead, is that right?

MR. ASH: Determining their own prices.

THE CHAIRMAN: And, by and large, it would be one price?

MR. ASH: That would be the tendency.

THE CHAIRMAN: That would be the tendency. Then you told me who those interests or buyers would be, in Texas, and I asked you would they be substantially the same buyers in the Middle East.

MR. ASH: No, sir.

THE CHAIRMAN: In interest? Not necessarily in name, but in interest?

MR. ASH: No, the answer is no, sir. There are other companies outside of that Texas area completely.

THE CHAIRMAN: Oh, I appreciate that, Mr. Ash, but the Shell organization, for instance, would be a buyer in Texas?

MR. ASH: Yes, it is.

THE CHAIRMAN: The Shell organization would be a buyer in the Middle East?

MR. ASH: Yes, it is a buyer in the Middle East.

THE CHAIRMAN: And the other oil companies and those interests you mentioned would be the same,





would they not?

MR. ASH: Not company by company. For instance, there are buyers in the Middle East who are not buyers in Texas.

THE CHAIRMAN: That is correct, and the same might be true in reverse.

MR. ASH: Yes.

THE CHAIRMAN: But, by and large, there are ---

MR. ASH: There are certain companies buying ---

THE CHAIRMAN: Buying in both localities?

MR. ASH: That is correct.

THE CHAIRMAN: Yes, organizations, the same in interest?

MR. ASH: Certain ones, yes.





THE CHAIRMAN: Well, then, how is it you can say that the price, the posted price in Texas is determined on a competitive basis with Middle East oil when you are not dealing at arm's length, are you?

MR. ASH: Oh, yes, we are, and the simple way is to say that the companies are different. I agree some are the same, but there are enough who are different to provide the competitive factor, and this has happened.

THE CHAIRMAN: It has happened, you say?

MR. ASH: Yes.

THE CHAIRMAN: Well, I think I understand a little bit about it.

Mr. Ash, would you be good enough to tell me the names of the principal officers of the Shell Oil Company of Canada?

MR. ASH: The officers, sir, or the directors?

THE CHAIRMAN: The officers.

MR. ASH: W.M.V. Ash, president. P.L. Kartzke, vice-president in charge of exploration and production, who is here. R.P. Ritchie, vice-president of transportation/supplies on my left. J.A. Ross, vice-president and treasurer. A.L. Wilson, who is not here, vice-president on marketing. G. Davidson, who is not here, vice-president of refining. The secretary is J.E. Hughes. We have just appointed







an executive vice-president, D.B. Vale.

THE CHAIRMAN: How many directors has the company?

MR. ASH: The company has eight directors. Do you wish to know their names?

THE CHAIRMAN: Please.

MR. ASH: Myself, W.M.V. Ash; G. Davidson, whom I mentioned; another Mr. Davidson, I.D. Davidson; D.B. Vale; V. Grafstrom; P.L. Kartzke, who is here; H.S.M. Burns; A.J. Galloway.

THE CHAIRMAN: Would you be good enough to give their residences?

MR. ASH: Individually?

THE CHAIRMAN: Yes, please.

MR. ASH: Ash, G. Davidson, I.D. Davidson, Vale, Grafstrom and Kartzke, that is six out of the eight, are resident in various parts of Canada, and Burns and Galloway are resident in New York.

THE CHAIRMAN: Would you be good enough to give us the same information with respect to Canadian Shell Limited?

MR. ASH: The Officers are I.D. Davidson, who is one of the directors I mentioned on my Board; V. Grafstrom, whom I mentioned as being on my Board, vice-president; and there is a newly appointed vice-president who has not yet arrived by the name of Holliday. The secretary is T.B. Brown.





The directors are W.M.V. Ash, R.B. Barr, I.D. Davidson, F.J. Stephens, J.L. Loudon, F. Schapers, V. Grafstrom and D.A. Rowe, treasurer.

THE CHAIRMAN: And their residences?

MR. ASH: Ash, Barr, I.D. Davidson and Grafstrom of the directors are resident in Toronto. All the officers are resident in Canada. That leaves Stephens and Loudon who are resident in London, England. Schapers is resident in the Hague, Holland.

THE CHAIRMAN: I understand both companies are private companies incorporated in Ontario?

MR. ASH: One, the operating company, my company, is a Dominion company. The holding company is an Ontario company.

THE CHAIRMAN: Would you be good enough to file with the Chairman of the Commission a copy of your 1956-57 balance sheets and profit and loss statement? Just one copy of each.

MR. ASH: Yes.

THE CHAIRMAN: If you will file those with the Chairman. This morning we got the quantities but not the dollar amount -- could you tell us what is the dollar amount of the 2 million-odd barrels of products imported by Shell into Canada in 1957 and the dollar value of the estimated quantity to be imported in 1958?

MR. ASH: We do not have it here but we can get it for you.





THE CHAIRMAN: Would you do that, please?

MR. ASH: Yes, 1957 and '58.

THE CHAIRMAN: Correct. Have you got the dollar value of your importations into Canada of crude in 1957?

MR. ASH: Not with me, but I can get that, also.

THE CHAIRMAN: Then would you please let us have that?

MR. ASH: Yes, sir.

THE CHAIRMAN: Also the dollar value of your estimated imports of crude for 1958.

MR. ASH: Yes.

THE CHAIRMAN: You were going to supply us with, or give us, some figures with respect to the Ontario refinery capacity in 1961. In the meantime would you tell us what you anticipate your refinery capacity, Shell's refinery capacity in Ontario in 1961 would be? I assume it is just your Bronte refinery.

MR. ASH: Yes. Of course, we have not started it; we have not yet come to a decision to build it. We have bought the land and we will make the decision next year.

THE CHAIRMAN: Judging by the press some months ago, I thought the decision had been made. What would be the capacity?

MR. ASH: As to the capacity, again, we







have not yet made a decision but I guess 30,000 barrels a day.

THE CHAIRMAN: Just for our assistance, would you be good enough to tell me what other oil companies are involved in this question of the Ontario refinery capacity? Would it be B.A.?

MR. ASH: Yes, in the area we are talking about it would be B.A., McColl-Frontenac, Cities Service, who are just completing, and our own at a future date. Then, in the Sarnia area, Imperial Oil, Canadian Oils, Sun Oil; that is the lot.

THE CHAIRMAN: That would be all?

MR. ASH: In Sarnia, yes.

MR. COMMISSIONER HARDY: Mr. Ash, Mr. Ritchie explained to us this afternoon that at the present time you could lay down oil in Vancouver cheaper than you could bring in Alberta oil but, as a matter of policy, you do not choose to do that. That principle, of course, would appear to be exactly the same position as the advocates of a pipeline to Montreal are asking us to accept in the Montreal area. As I understand your position: fundamentally, while there is a lot of detailed argument in the brief, I think, possibly, your real fundamental argument against it was given this afternoon when you said you did not consider it would be in the best interests of the petroleum industry on a world-wide basis to throw 250,000 barrels a day onto the open





world market.

MR. ASH: No, sir, I simply mentioned that as an additional factor.

MR. COMMISSIONER HARDY: You do not think that is the most important factor?

MR. ASH: No, I think the important factor is, even though at the present moment Shell could buy cheaper oil for what we call our Vancouver refinery, cheaper than the Canadian oil we are supplying, we do regard that as a long-term basically economic point at which to use Canadian crude oil. But the other one in Montreal we do not consider a long-term basic place at which to refine crude oil.

MR. COMMISSIONER HARDY: Assuming the industry has to solve its problem of throwing 250,000 barrels a day onto the world market, would you agree that at the present time that would become the immediate problem of the United States Government rather than the industry?

MR. ASH: I did not attempt to say where it would be. Perhaps I was too specific. I simply used the words "resting place"; possibly the resting place of that oil would be in the ground, as someone suggested. I simply say in its contribution to the over-supply situation that oil might even find its way to the West Coast.

MR. COMMISSIONER HARDY: You do not care to comment; in other words, you do not want to commit





yourself as to whether it would become an American Government problem or not?

MR. ASH: No. Now, if it does become an American Government problem in the Puget Sound area or California, that is our problem, too.

THE CHAIRMAN: Thank you very much, Mr. Ash. I think that you and your colleagues will, probably, be asked some further questions by members of the Commission tomorrow morning when we re-assemble. I think, however, we had better adjourn now.

Gentlemen, we will adjourn until tomorrow morning at 10.00 o'clock in this room.

---Whereupon the hearing adjourned at 4.30 p.m.  
until 10.00 a.m., Saturday, May 3rd, 1958.

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*Mr. Borden*

# ROYAL COMMISSION

ON

## ENERGY

HEARINGS

HELD AT

CALGARY,

ALTA.

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## ROYAL COMMISSION

ON

ENERGY

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Hearings held at Calgary,  
commencing Tuesday, April  
29, 1958, at 10.00 a.m.

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### PRESENT:

Mr. H. Borden, C.M.G., Q.C.	-- Chairman
Mr. J.L. Levesque	-- Member
Mr. G.E. Britnell	-- Member
Dr. R.D. Howland	-- Member
Mr. L.J. Ladner, Q.C.	-- Member
Dr. R.M. Hardy	-- Member

---

### COMMISSION COUNSEL:

Mr. A.S. Pattillo, Q.C.	
Mr. Miles H. Patterson.	
Mr. J.F. Parkinson	-- Secretary to the Commission.
Major N. Lafrance	-- Assistant Secretary to the Commission.







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APPEARANCES:

Representing Shell Oil Company of Canada, Limited:

Mr. W.M.V. Ash	-	President
Mr. R.P. Ritchie	-	Vice-president in charge of Transportation and Supplies
Mr. J.A. Ross	-	Vice-president and Trea- surer
Mr. P.L. Kartzke	-	Vice-president in Charge of Exploration and Dis- covery.

- - -







Saturday,  
May 3, 1958.

---On resuming at 10.00 o'clock.

---Mr. Commissioner Ladner was not present.

---Mr. Commissioner Hardy was not present.

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearing.

Mr. Ash, your brief is very fine in every way but in it and in your testimony yesterday you are against the extension or building of a pipeline to Montreal and the general tenor of your brief is to leave the present situation alone and nature will take care of itself in due course. Is there any recommendation, at least any suggestion, which you or your colleagues could make to the Commission as to how the present situation could be alleviated in so far as Canadian oil production is concerned?

MR. ASH: You mean in the short term, sir?

THE CHAIRMAN: Yes.

MR. ASH: Because we have suggested in the long term the building of refining capacity in Ontario is one of the main answers.

THE CHAIRMAN: In addition to that, I think you want to rely on exports to the United States.





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MR. ASH: Also in the longer term.

THE CHAIRMAN: In the longer term.

There are those that have expressed the view before us that that is a very uncertain situation for Canada to be placed in and that we should do something to help ourselves. After all, the United States is taking steps to help itself in this present crisis, you might say. Have you any alternative to the Montreal market that you can suggest to the Commission?

MR. ASH: In the short term or long term, sir?

THE CHAIRMAN: In the short term and also in the long term.

MR. ASH: In the long term, I think we stand on what we said. We believe the American need for our oil is inevitable and that we will have the export figures which we have cabled. We also feel, and we ourselves intend to do it, that the building of refining capacity in Ontario will be a major addition to the outlet of Canadian oil. In the short term I have already mentioned Anacortes is doubling and I have reason to believe that will steadily increase and go back to what I will call normal. There is another possibility which I can only make as a suggestion because we are only just looking at it and have not, by any means, worked it out but





it might be possible to divert some of the refining which is now done in Montreal to existing Ontario refineries.

THE CHAIRMAN: By bringing the crude by water?

MR. ASH: No, by entering into processing agreements or buying products in Ontario which are now supplied out of Montreal. As I say, sir, it is only a suggestion, it is only in the mind; whether or not it can be worked out I do not know but it is a short term possibility.

THE CHAIRMAN: I think it is fair to say it is hard to understand the reasoning that is stated at times that we are a trading country and we are building a wall around ourselves but are we building a wall around ourselves by going into the Montreal market as long as we have a surplus in our country? Should we not supply our own needs?

MR. ASH: Sir, it is a matter of one's opinion but mine is that you are facing the building of a wall around Canada if you do that.

THE CHAIRMAN: It does not seem logical, let us say, to export wheat from Western Canada to the Western United States and import wheat into Eastern Canada, does it?

MR. ASH: I am afraid that is out of my field.

THE CHAIRMAN: Tell me, is Shell interested --







have you a refinery in the Maritime provinces?

MR. ASH: No, sir, we have not.

THE CHAIRMAN: Thank you, very much.

MR. FRAWLEY: I would like to begin directing two or three questions to Mr. Kartzke apropos of something that took place yesterday.

Mr. Kartzke, are you in favour of the pro rationing of the oil industry in Alberta as it is now practised by the Conservation Board?

MR. KARTZKE: On the whole, yes.

MR. FRAWLEY: Have you any objection to the Conservation Board with regard to their pro rationing policy?

MR. KARTZKE: No.

MR. FRAWLEY: In any degree, large or small?

MR. KARTZKE: No.

MR. FRAWLEY: Do you know of any major or independent company that has protested to the Conservation Board against pro rationing and seeking to be released from it?

MR. KARTZKE: I know of none.

MR. FRAWLEY: Do you think it would be possible to produce the oil in Alberta, faced as we are with a lack of market, without the pro rationing that is now in practice by the Conservation Board?

MR. KARTZKE: I do not know that I understand

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your question.

MR. FRAWLEY: Let me phrase it differently, then, Mr. Kartzke: is the pro rationing to market required by the Alberta oil industry at the present time?

MR. KARTZKE: Well, Mr. Frawley, I said that as far as we were concerned we were in favour of it. By required, do you mean if there was no pro rationing we would have no industry?

MR. FRAWLEY: Is it necessary for the well-being of the industry today?

MR. KARTZKE: Well, I said that we were in favour of it. I think the industry could exist without it.

MR. FRAWLEY: All right, that is precisely what I want to ask you about. Let us assume we had no pro rationing at all: the market leader is Imperial Oil. Are you aware that before pro rationing was adopted as a policy of the Conservation Board that the market leader had to do its own pro rating?

MR. KARTZKE: Certainly.

MR. FRAWLEY: And if there was no pro rationing by the Board, would we not, immediately and automatically, return to pro rationing by the market leader?

MR. KARTZKE: Not necessarily by the market leader but by the purchasers of crude oil.





MR. FRAWLEY: Either by the market leader or some committee of the purchasers.

MR. KARTZKE: I think that is correct.

MR. FRAWLEY: That would be inevitable?

MR. KARTZKE: I think so.

MR. FRAWLEY: Let me just follow it a little further: let us suppose a company, let us take McColl - - McColl has some production up at Bonnie Glen.

MR. KARTZKE: I am not sure.

MR. FRAWLEY: Either McColl or Texas - - and they have a refinery in the Puget Sound area.

MR. KARTZKE: Yes.

MR. FRAWLEY: If there was no pro rationing I suppose the Texas interests would say, "We will ship all our Bonnie Glen production into the Puget Sound area". That would follow, would it not, in their own interests?

MR. KARTZKE: No, I do not think so.

MR. FRAWLEY: What would they do?

MR. KARTZKE: They might very well purchase a certain amount of their crude.

MR. FRAWLEY: Well, if they decided to send their crude down and side by side with their production was an independent operator who had no refinery to send it to, would he be hurt?

MR. KARTZKE: I do not think that follows.

MR. FRAWLEY: What would be the position of







that independent operator with no position and no refinery to send it to?

MR. KARTZKE: He would endeavour to sell it to the crude purchasers.

MR. FRAWLEY: Would there not be some inclination on his part to offer it at a cheaper price?

MR. KARTZKE: That would depend on the circumstances, entirely.

MR. FRAWLEY: And might be a consequence?

MR. KARTZKE: That he would cut the price might be a consequence; is that your question?

MR. FRAWLEY: Yes.

MR. KARTZKE: That is a possibility.

MR. FRAWLEY: Would that be good or bad for the industry as a whole?

MR. KARTZKE: The cutting of the price?

MR. FRAWLEY: Yes.

MR. KARTZKE: Well, Mr. Frawley, I think our business is one of competition and he is entitled to cut the price if he so desires.

MR. FRAWLEY: That is true, but I am asking what you think about the well-being of the Alberta oil industry if you get into that sort of thing, the cutting of the price because they had no refinery outlet.

MR. KARTZKE: If the price was cut to an unreasonable extent, I think it would be bad.





MR. FRAWLEY: I put it to you, Mr. Kartzke, if there was no pro rationing by the Conservation Board associated with the allowable shipped by the Board, that there would be a danger of a departure from proper conservation principles? What do you say about that?

MR. KARTZKE: Would you repeat that?

MR. FRAWLEY: I say there would be danger of departure from proper conservation principles if you had a market in which the producers were all endeavouring to sell their oil where they could and in endeavouring to do it by cutting prices.

MR. KARTZKE: There is a possibility there might be some loss in conservation but I would think that possibility would be very minor.

MR. FRAWLEY: Then I am asking you for your considered opinion; do you think, as the vice-president of Shell Oil in Alberta, that we could get along just as well if we abolished pro rationing tomorrow?

MR. KARTZKE: I think I answered that question when you first put it to me: we are in favour of pro rationing, therefore, I think we must think that it is probably the best method of handling the problem.

MR. FRAWLEY: In other words, you think that we have to solve our market difficulties within the four walls of the pro rationing and conservation





principles as we now have them in this province?

MR. KARTZKE: Well, I think the methods that we have now are the best that we have devised for this problem up to now, yes.

MR. FRAWLEY: Do you think that the pro rationing, as it is now practised and conservation associated with it is resulting in a lack of incentive on the part of the producers to go and find markets?

MR. KARTZKE: In some instances; but, as I said yesterday, I think the industry as a whole is continuing to try and find markets for our crude oil.

MR. FRAWLEY: If we abolished pro rationing tomorrow, would we thereby make it any more feasible to move out the shut-back production which we now have to suffer.

MR. KARTZKE: Are you speaking now of Shell production or industry production?

MR. FRAWLEY: The whole industry.

MR. KARTZKE: No, I do not think so.

MR. FRAWLEY: Now, Mr. Ash, apropos of what the Chairman said to you this morning, do you regard the fact that Alberta could produce now 750,000 barrels a day, or roughly that figure, but can only sell 35%, do you regard that as a serious thing for the Alberta oil industry?

MR. ASH: At the moment I agree it is







a serious thing.

MR. FRAWLEY: I am told when you compare the seriousness of our shut-back production to the shut-back in Texas, that we are a little worse off than they are - - something of the order of 65% shut-back with us and 60% shut-back with Texas. Is that roughly as you understand it?

MR. ASH: I would like Mr. Kartzke to answer that question.

MR. KARTZKE: I do not think we know the answer to that question.

MR. FRAWLEY: But, in any event, the Independents in Texas are endeavouring to obtain mandatory restrictions of imports into the United States.

MR. ASH: I understand so.

MR. FRAWLEY: And that is for the purpose of solving what they regard as a bad state of affairs in the producing sections of the United States.

MR. ASH: I repeat, sir, that in certain sections of the United States it is serious.

MR. FRAWLEY: Now, Mr. Ash, in your consideration you say that Montreal has an advantage now over western crude bringing Venezuelan crude; it has an advantage and, as I take it, that is why you think it is uneconomic to try and reach Montreal with Alberta crude.

MR. ASH: We are thinking not only of





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now but of the next twenty years.

MR. FRAWLEY: Thinking of it now or for the next twenty years, it is difficult for Alberta crude to reach Montreal because that would have to overcome what you call the advantage of Venezuelan crude laid down in Montreal.

MR. ASH: Venezuelan and Near East crude.





MR. FRAWLEY, Now you also say on page 24 of your brief that as the refining capacity is enlarged in the Toronto/Hamilton area the products from that area, from that refining area, could push eastward and displace Montreal refined products. That is what I find a little difficult to understand, if the Montreal refiner has that advantage now, how the Toronto/Hamilton refinery could displace his products.

MR. ASH: May I turn that over to Mr. Ritchie? This is his department.

MR. FRAWLEY: Would you mind explaining to me, Mr. Ritchie, something which, frankly, I couldn't understand; it looked a little contradictory. Can you reconcile that?

MR. RITCHIE: If you were talking about the Toronto market and you are trying to compare the cost of a refinery making product available in Toronto in the Toronto refinery as against the Montreal refinery, there is the cost of transportation of your products, so the Toronto refiner has the advantage, without the transportation.

MR. FRAWLEY: It says: "As refining capacity is enlarged in the Toronto/Hamilton area the radius of economic product distribution will push eastward, replacing Montreal refined products."

MR. RITCHIE: That is right, sir.

MR. FRAWLEY: Where are they going to







displace Montreal refined products?

MR. RITCHIE: At the present time Montreal products come through as far as Hamilton, not for the entire industry but for part of it. There is a fair percentage of the Toronto market itself served from Montreal, and if you have a full refinery capacity in the Toronto area to serve the Toronto market, then the normal distribution of that Toronto refinery area would be east of Toronto into areas which are now served by Montreal. It seems to me that that is quite self-evident.

MR. FRAWLEY: You could narrow the orbit, as you say, of the Montreal refining area.

MR. RITCHIE: Yes.

MR. FRAWLEY: If you start making products in Bronte. Well, B.A. makes them at Clarkson, doesn't it?

MR. RITCHIE: They have their refinery at Clarkson, and they have largely, I believe, eliminated movement from Montreal to Toronto.

MR. FRAWLEY: Now, does the lack of decision for the building of your refinery at Bronte result from the fact that there is an advantage now with \$3.07 Venezuelan crude in Montreal?

MR. RITCHIE: No, you build a refinery because you need refining capacity, and the lack of decision, as you put it, is because we do not





require the additional refining capacity in eastern Canada at the moment.

MR. FRAWLEY: Because you serve the Toronto market from Montreal.

MR. RITCHIE: We do. That is only for the time being, as you can appreciate. We say it is our plan to build a refinery in the Toronto area, and at that time we would serve the Toronto area and east of Toronto with products made from Canadian crude.

MR. FRAWLEY: Page 27 of your brief says something that seems a little strange. "As Quebec refineries were compelled to a diet of high-cost crude, the unrestricted Maritime refiners would be able to infiltrate the Montreal refiners' market." Now, does Shell Oil seriously contemplate Venezuelan crude going into the Halifax refining area being manufactured into products and supplying the large Montreal market from Halifax? I just want to know how seriously Shell contemplates that, if you don't mind my saying so, extraordinary situation.

MR. RITCHIE: I think we established that you could lay down a port which is open the year around, particularly with Mid-East crude, at a considerable differential below the indicated price of Canadian crude into Montreal, and there was sufficient differential indicated which would





make the movement of product into the Maritime refineries feasible; and there is another refinery being proposed and going to be completed, which refinery, I understand, is contemplating using Mid-East crude. You can understand that with this situation it would be more competitive moving products into the Montreal orbit if Montreal is actually operating on a high-priced crude.

MR. FRAWLEY: I put it to you very bluntly that that is all pure theory. Shell has a large refinery investment in Montreal. That is so, isn't it?

MR. RITCHIE: Yes, that is a matter of fact.

MR. FRAWLEY: They also have a large market in the Montreal area. That is a matter of fact also.

MR. RITCHIE: You are talking about the Quebec Province?

MR. FRAWLEY: I simply put it to you, is Shell contemplating letting that refinery investment remain idle and deteriorate and buying products at Halifax and bringing them up and supplying what they are now supplying Montreal market?

MR. RITCHIE: There is no inference of that, sir.

MR. FRAWLEY: I put it to you that, however







much you may theorize, the facts are so embedded in the Montreal and Quebec economy now that the day will never come when Quebec will have its petroleum products brought in by pipeline from refineries in Halifax.

MR. RITCHIE: There has been no discussion about bringing in pipelines from there. All we have said is that if Montreal was running on Alberta crude and the Maritime refineries were running on foreign crude the Maritimes refineries would have a competitive advantage of moving products into the Montreal area. I can assure you that the petroleum business is very competitive, and the fact that we have today a certain volume and certain refining capacity does not necessarily mean that we retain it against competition if, in fact, the competition can obtain products at a cheaper price than we could in Montreal.

MR. FRAWLEY: Supposing you had to pay \$3.16 for Redwater crude at Montreal - I am using a figure of 51.8 - if you had to pay 3.16 in Montreal for Redwater crude as against 3.07-3/4, would that difference be sufficient to warrant you abandoning your Montreal refining operation and get your products from a Halifax refinery using even cheaper Venezuelan and Near East crude?

MR. RITCHIE: We have never inferred that





that was the case, sir.

MR. FRAWLEY: Are you saying that that would be good eventually and economically for the Shell Oil Company of Canada?

MR. RITCHIE: No. If we are going to continue talking about the advantage that may accrue to a Maritime refiner we should get back to the differentials we discussed available today and not talk about our cost of laying down throughput and pipeline, Mesa crude, as against 3.16 which is your figure for Alberta crude laying into Montreal. We are talking about two different areas.

MR. FRAWLEY: I am asking you to assume we can get Alberta crude into Montreal at 3.16. Take that as an assumption. Assume we can put Alberta crude into Montreal at 3.16, and you are bringing in your own crude from Venezuela at 3.07-3/4. I just want to know whether you want to leave the impression with this Commission that you would seriously consider before you do that, before you would take the Redwater crude at 3.16, you would abandon the Montreal situation and look to some refinery in the Maritimes to supply the Montreal market?

MR. RITCHIE: We have never considered that.

MR. FRAWLEY: Would you give me the





step by step make-up of the laid down price at Montreal? As you were good enough to give it to me and as I wrote it down, it may appear well in the record if you attended to me as I read it. You buy Mesa crude 38 A.P.I. gravity --

MR. RITCHIE: It is 30.8.

MR. FRAWLEY: And it goes on ship at Venezuela at \$2.79 a barrel, and then you have an item of cargo insurance which is .001, and then an item of ocean freight of .246, transportation loss before Portland .009, terminaling at Portland .020. Pipeline loss allowance is 0.15, tariff of the Portland Pipe Line Company to the Canadian boundary is .060, which gives us a sub-total at that point of \$3.14, 3.141 actually. The Canadian equivalent of that is 3.047, and you have the tariff to Montreal of .030, and that gives you \$3.077. You gave it to us as \$3.07-3/4. That is the correct make-up, is it, Mr. Ritchie?

MR. RITCHIE: Yes, sir.

MR. FRAWLEY: Now, the sulphur content of Mesa crude you have been good enough to tell me, was of the order of 1%.

MR. RITCHIE: Yes, sir.

MR. FRAWLEY: And I put it to you that, according to ordinary practice, that would require a 10¢ differential in favour of Redwater crude. What do you say about that?







MR. RITCHIE: I would like you to define what "ordinary practice" is, sir.

MR. FRAWLEY: Well, you are probably not asking the right man for that, but I am told there is a differential for sulphur crude as against sweet crude, and sweet crude will command more in the market.

That is certainly a layman's description of it. What do you think about that?

MR. RITCHIE: We think about one per cent sulphur Venezuela crude is a relatively sweet crude. Our refineries are geared to run that and we can obtain from it products of a sweet nature, having a ready market. For instance, you have, today, a relatively sweet crude with a low mercaptan content, producing such things as mineral spirits, and we can obtain that from Mesa crude without difficulty, so we certainly would not be interested in paying a premium to get a lower sulphur material.

MR. FRAWLEY: There is also an adjustment, I am told, that is very easy to make, and that is for A.P.I. gravity, and I suggest there should be an adjustment of 8¢ in favour of Redwater crude, as Redwater is 35 degrees A.P.I. as against your 30.8, and that the usual allowance is 2¢ a point.

As a matter of fact, that is what you advertise, yourself, isn't it, in the Venezuela publication called 'Petrolio'?





MR. RITCHIE: We did not advertise it, sir.

MR. FRAWLEY: Well, that all comes back to what "we" is. The Compania Shell di Venezuela advertised it?

MR. RITCHIE: I work for the Shell Company of Canada Limited, sir.

THE CHAIRMAN: Are you reading from the English or the Spanish textbook?

MR. FRAWLEY: You might be sorry you asked me.

What is the name of the consignor of the Mesa crude that you receive in Montreal? Who ships you that crude?

MR. RITCHIE: It is shipped by Shell of Venezuela.

MR. FRAWLEY: Well, the Master of the vessel brings a bill of lading with him, I suppose?

MR. RITCHIE: Yes.

MR. FRAWLEY: And on that bill of lading the shipper is the Compania Shell di Venezuela?

MR. RITCHIE: That is correct.

MR. FRAWLEY: And the consignee is shown as what?

MR. RITCHIE: The Shell Company of Canada.

MR. FRAWLEY: Not any other Shell; the Shell Company of Canada.

Now, just a word about that pipeline tariff.





What is the mileage from Portland to the Quebec boundary?

MR. RITCHIE: We had that question yesterday, sir.

MR. FRAWLEY: Yes.

MR. RITCHIE: I have not the information. I gave you the total mileage, Portland to Montreal. Somebody else may have the information.

MR. FRAWLEY: Well, if somebody has it, I would like to just make a quick comparison, that's all. I have a figure of 236.7 miles.

MR. RITCHIE: That is the figure I gave you.

MR. FRAWLEY: Is that the total distance from Portland to Montreal?

MR. RITCHIE: From South Portland terminal to Montreal.

MR. FRAWLEY: Do you know what the distance is from the boundary into Montreal, the Quebec boundary to Montreal?

MR. RITCHIE: No, sir.

MR. FRAWLEY: Do you know whether it is 118 miles? 236 is the total and one-half of that would be 118 miles. Is it 118 miles from the boundary?

MR. RITCHIE: No, it is less than 118, sir.

MR. FRAWLEY: Does any in the Shell group know the distance from the Quebec boundary into the City of Montreal?







MR. ASH: It is around 40, sir.

MR. FRAWLEY: Then can you tell me why the Montreal Pipe Line Company is charging you 3¢, when you only pay 6¢ for 236 minus 40? Is there any explanation about that, Mr. Ritchie?

MR. RITCHIE: No, I have no explanation about it, sir.

Why don't you wait until Portland is going to present some information and ask them? I mean, it seems to me it is a relevant question to ask of them and I indicated yesterday that Portland do intend to give you factual data.

MR. FRAWLEY: Well, we will. We will ask them some questions. But, while I have got one of their best customers here, I might just ask him what he thinks about the rate.

Have you protested the 3¢ rate?

MR. RITCHIE: No, sir.

MR. FRAWLEY: Have you anybody in Quebec to whom you could protest? I mean, have you any regulatory body that supervises the affairs of the Montreal Pipe Line Company?

MR. RITCHIE: I suppose we could protest. As a matter of fact, the question has never come up.

MR. FRAWLEY: It is not subject to the jurisdiction of the Board of Transport Commissioners. This pipeline, I suppose, exists wholly within the Province of Quebec?





MR. RITCHIE: That is correct.

MR. FRAWLEY: And you are paying them 3¢ out of a total of 9¢ to carry it 40 miles as against 6¢ that you pay for 236 minus 40.

MR. PATTILLO: Mr. Frawley, I think there is something that may be entirely wrong. As I understand it, this is one continuous pipeline, the same as the Interprovincial pipeline, in that, in the United States, you have a separate subsidiary company, as does Interprovincial; but I would think that the whole undertaking being one and crossing over an international border, it is entirely within the jurisdiction of the Board of Transport Commissioners, just as is Interprovincial.

MR. FRAWLEY: Well, now, do you know whether or not these rates are filed with the Board of Transport Commissioners for Canada?

MR. RITCHIE: Frankly, I can't tell you.

MR. FRAWLEY: I think I will pursue that with the Montreal Pipe Line Company.

Now, Mr. Ritchie, I want to talk to you, for a moment, about -- well, first, before we leave the Mesa crude, Venezuela Shell, we might call it ---

MR. RITCHIE: May I interrupt, sir?

MR. FRAWLEY: Yes.

MR. RITCHIE: I have here a map indicating the route of the Portland-Montreal system and it indicates, roughly, that it is in the order of 70





miles in Canada.

MR. FRAWLEY: 70 miles?

MR. RITCHIE: Yes.

MR. FRAWLEY: Out of 236?

MR. RITCHIE: That is correct, sir.

MR. FRAWLEY: And does the information you have there indicate whether or not its tariffs are filed with any Quebec authority or any Federal authority in Canada?

MR. RITCHIE: No, I am afraid I cannot give you that information, sir.

MR. FRAWLEY: Now, turning to the Shell of Venezuela, that company does some refining in Venezuela, does it?

MR. RITCHIE: I believe so.

MR. FRAWLEY: Do you know whether or not the price at which they sell to the refinery -- well, any refinery operations, would be carried on under the name of Compania Shell di Venezuela? Do you know that? Mr. Ash will probably know that.

MR. ASH: I think the one refinery at Cardon and another at San Lorenzo are carried on under that name.

MR. FRAWLEY: Those are the only refineries you have in Venezuela?

MR. ASH: Yes.

MR. FRAWLEY: So the Venezuela company carries on both production, refining and, presumably,







some marketing also?

MR. RITCHIE: Yes.

MR. FRAWLEY: In Venezuela?

MR. RITCHIE: Yes.

MR. FRAWLEY: Do you know whether or not the company is selling, to its refining department, Mesa crude of 30.8 gravity at \$2.79 or at something more or less?

MR. ASH: I don't know, sir.

MR. FRAWLEY: The Compania Shell di Venezuela would be able to say that?

MR. ASH: Yes.

MR. FRAWLEY: The principal business of the Compania Shell di Venezuela is the production and export of crude petroleum?

MR. RITCHIE: Yes.

MR. FRAWLEY: How many destinations in Canada does its crude have?

MR. RITCHIE: One destination.

MR. FRAWLEY: Montreal?

MR. RITCHIE: Yes.

MR. FRAWLEY: I notice, from a chapter in this very nice little booklet that you sent to me, Mr. Ash, that 20 million barrels was sent to Canada in 1956. That would be about so, would it?

MR. ASH: I presume so, sir.

MR. FRAWLEY: And that was out of the total of 265 million barrels, so that I presume the Canadian





outlet for Venezuela crude, insofar as this Venezuela Shell Company is concerned, is an important outlet?

MR. ASH: Yes, sir.

MR. FRAWLEY: Now I want to call your attention to two postings of tank waggon gasoline prices in the "National Petroleum News" for April, 1958, page 195.

The Imperial Oil is pretty well the market leader in Canada, isn't it?

MR. RITCHIE: Yes.

MR. FRAWLEY: And its postings are the official postings?

MR. RITCHIE: Yes, sir.

MR. FRAWLEY: And the Shell Company sells, by and large, at the prices posted by Imperial Oil?

MR. RITCHIE: Not always, sir.

MR. FRAWLEY: Let us see if they do, in these instances. Are you selling regular Shell gasoline, regular grade, in Montreal, tank waggon prices, of course, for 22.6?

Perhaps somebody from your marketing department could answer that.

MR. RITCHIE: I certainly would have to check it, sir.

MR. FRAWLEY: I would just like to be sure. I would not want this to be one of the instances and then it would throw me right out.

MR. RITCHIE: I think that is correct, sir.





MR. FRAWLEY: Would you mind checking it and correct it if it is not correct?

I find also that regular gasoline, posted by Imperial Oil in Toronto, is 22.8. Would you also say that was your price for tank waggon regular grade?

MR. RITCHIE: What date is this you are quoting, sir?

MR. FRAWLEY: I am quoting from the "National Petroleum News" of April, 1958. If I had the date of the posting I would be glad to give it to you.

Here it is; March 1st, 1958. These prices were in effect March 1st, 1958.

MR. RITCHIE: I would have to check, sir, but I believe that would be our price.

MR. FRAWLEY: So that except for two decimal points the posted tank waggon price of regular gasoline in Montreal and Toronto are the same.

Now, I will give you this figure of Redwater crude, laid down at Clarkson, where B/A has a big refinery. \$3.39.

I give you, as reference, the Interprovincial brief at page 33.

Now, would you accept that figure?

MR. RITCHIE: If they say it is the cost, I would accept it.

MR. FRAWLEY: And I give you a laid down







crude price of Mesa at Montreal of \$3.07 3/4, which is what you have given me, yourself.

So I put it to you that there is a much better refinery spread at Montreal than -- let me be bold enough to say, than, perhaps, there should be.

What do you say about that?

MR. RITCHIE: I wouldn't agree with that, sir.

MR. FRAWLEY: No. No. But I put it to you that the Montreal refiner could pay 31¢ more to Alberta producers for crude oil and still maintain the same refinery spread.

MR. RITCHIE: I wouldn't say that that was a correct inference, either, sir. To specifically take a plant, Toronto and Montreal, and compare them, there are zone areas in which gasoline prices vary and there are also zone areas in which you have the same price, and transportation. In other words, the best return in a zone area, if it is a large area and has the same price, the best return is right outside your refinery fence.

You cannot categorically take any one location and say there is a better return to the refinery for this location than the other. It is very complex.

MR. FRAWLEY: It is certainly very complex.

MR. RITCHIE: But you are making inferences on just two spot situations, and I want to draw that to your attention.





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MR. FRAWLEY: I simply say this -- and it is for the Commission to draw its conclusions -- I say it looks as if the refinery at Clarkson has a tank waggon price of \$2.23 and a laid down price for crude of \$3.39. Shell has a laid down crude price of \$3.07 and a tank waggon price of \$2.26 at Toronto and \$2.23. I say those are the comparisons between the laid down crude and the nearest tank waggon price. To me, at least, you have got a much better refinery spread in Montreal than you should have, that's all.

What do you say about that?

MR. RITCHIE: I said that is an inference that you are making that is not necessarily correct. As a matter of fact, I would categorically say it was not correct.

MR. FRAWLEY: What is the justification, then, or what is the explanation for a refinery putting in crude at 3.07 and charging 22.8, and another refinery putting crude in at 3.39 and charging 22.6? They do not seem to fit, to me, Mr. Ritchie.

MR. RITCHIE: Sir, if all we made was gasoline, then perhaps some of the inferences you are drawing would have some validity, but when you make a full range of materials you have to take the cost of raw materials and of operations, the cost of all the products.

MR. FRAWLEY: And we would have to take your heating oils and compare those two, alongside





the other price, take the fuel and compare ---

MR. PATTILLO: I think, Mr. Frawley, with great respect, you were inquiring, once before, when you got into this thing, and I understand it lasted 18 months and nobody ever found the solution.

MR. FRAWLEY: Well, I am prepared to say now that we did not find anything quite so simple as this.

THE CHAIRMAN: The Clarkson price might be a loss leader.

MR. FRAWLEY: That could be. We will hear from them later.

You see, Mr. Ritchie, the reason I am putting this to you is this: we have heard that one of the immediate effects of putting Alberta crude into Quebec would be to put up, necessarily, the consumer price in Montreal. Now, I will not say that is an effort to try to divide the two good Provinces of Alberta and Quebec, but I do think that I would like to resist that and I suggest the figures I have just given to you mean that there would be no reason whatever to put up the consumer prices in Montreal on those kind of figures, and if you try to do so I would expect the Quebec Government to say something about it very quickly. Now, what have you got to say about it?







MR. RITCHIE: I thought we established that point a minute ago; you cannot talk about gasoline alone. You have to go into the whole range of products. The only inference you are drawing is that the Quebec refineries are just making away too much profit and, therefore, there is plenty of room for them to take a lower margin of profit.

MR. FRAWLEY: All I say is that it shifts the onus.

MR. RITCHIE: That is what you say.

MR. FRAWLEY: I want to say something, too, about something Mr. Ash said because he put up my hopes yesterday when he said Puget Sound would be taking twice the volume of Alberta crude next month.

MR. ASH: No, sir, I did not say that.

MR. FRAWLEY: I am sorry.

MR. ASH: I said our refinery, and when I say our refinery I should say our American refinery, would be putting up the quantities.

MR. FRAWLEY: Now, Mr. Ash, I want to call your attention to a document someone gave me issued by the Texas Railroad Commission, Oil and Gas Division, Austin, Texas. It is a statement concerning imports of crude oil and products into the United States as submitted by importing companies in compliance with Texas Senate Resolution No. 79





and House of Representatives Resolution No. 103.

I find that the Shell Oil Company represents that from Canada they will be importing 34 to 38 gravity crude, 13.0 in March; in April 9.8; in May 8.7; in June 9.0; in July 8.7 and in August 18.

So, if those figures mean to you what they mean to me, and I certainly want your comment on them because I may not be reading them correctly, but do they mean you will not be doubling your take on Alberta crude until August?

MR. ASH: May I see that?

MR. FRAWLEY: Yes, indeed. Unless there is some other place where you are taking Canadian crude in and I do not suppose there is; you have not started taking it into Montreal yet.

MR. ASH: While Mr. Ritchie is studying the document, all I want to say is I have the personal assurance from our American company that their nomination for next month will be double what they are.

MR. FRAWLEY: Well, Mr. Ash, as far as I am concerned I am going to take it from you rather than from that document.

Perhaps you will agree with me when we are in this state of complete frustration, wondering where we are going to put our crude, a document like that sent out by the Texas Railroad Commission





Oil and Gas Division is not very comforting.

MR. ASH: Not as it stands, sir.

MR. FRAWLEY: Mr. Ash, I would like to direct my attention to something you say on page 28 of your brief. You say, "No one is more interested than our company in obtaining new markets for Canadian crude oil in which we can share and so improve our revenue and obtain a return on our very substantial investment in Western Canada. What we fear is a failure to resist the temptation to cure a short-term cyclical difficulty by basically uneconomic measures - - " and so on.

MR. ASH: I am sure you would be fair enough to agree with me that there are varying degrees of ability to resist anything?

MR. ASH: Especially temptation.

MR. FRAWLEY: Yes, especially temptation. It is pretty hard to resist a temptation of letting that Venezuelan crude oil go into Montreal at \$3.07 rather than \$3.17 for Redwater. I put it to you, there is a terrific degree of ability to resist between Shell and, say, an Alberta independent, let us take Okalta Oils, for instance. There is a pretty large degree of variation in the ability to resist, is there not, Mr. Ash?

MR. ASH: I do not have any information but my inclination is to disagree.

MR. FRAWLEY: Your inclination would be







to disagree. You are president of Shell of Canada and I just put it to you that if you were an independent that had just made a reasonably large investment in, say, an Alberta Crown reserve where it was trying to get out some oil, that its ability to resist a temptation to cure a short-term difficulty by finding a market in Montreal would be much less strong than the ability of Shell Oil.

MR. ASH: I cannot argue about degrees of temptation; you should ask Okalta. But, I do think if that Independent looks at all the facts as we look at them and looks down the road twenty years, I would like to convince him his interests are exactly the same as ours.

MR. FRAWLEY: When you speak about our company, we have to refer to the Shell organization, do we not?

MR. ASH: No, sir.

MR. FRAWLEY: No; let us look at the Shell organization anyway. I am doing this largely because of your last answer. It is on the record yesterday, in part, and I would like to make it just a little more specific. You told us yesterday that the Shell Company of Canada owns 50% of Canadian Shell, the Ontario Company, and 50% of Shell, the Delaware Corporation?

MR. ASH: Yes.





MR. FRAWLEY: And that the Delaware Corporation -- that is the US name -- was owned, 65% by Canadian Shell and 35% by the public.

MR. ASH: Yes, sir.

MR. FRAWLEY: That is correct?

MR. ASH: 65.32%.

MR. FRAWLEY: You told me Canadian Shell's ownership was of the order of 60% by Royal Dutch Shell and 40% by the U.K. Shell, Shell Transport and Trading.

MR. ASH: I should say, sir, I simplified my reply to arrive at that result and cut out some other corporate structure but, fundamentally, the Canadian Shell Holding Company owns 60% of Royal Dutch and 40% U.K. Shell and Shell Transport and Trading.

MR. FRAWLEY: The simplification does not do any violence to that. The directors on Shell of Canada are: Ash, Toronto; I.D. Davidson, Toronto; G. Davidson, Toronto; Vale, Toronto; Grafstrom, Toronto; Kartzke, Calgary; Burns, New York; Galloway, New York?

MR. ASH: Yes.

MR. PATTILLO: Mr. Chairman, I do not want to interrupt my friend but that was all put on the record yesterday and we are concerned about getting on because Mr. Kartzke is going away. I do not want to cut my friend in any way but I must





ask him to please not repeat what we have on the record.

MR. FRAWLEY: I certainly do not want to be guilty of repeating and I would only do it for the purpose of necessity. I am sure you are aware of the position of the Government of Alberta in this serious situation. I know I have had lots of liberty and will continue to get nothing but courtesy from the Commission and my friend but I would like to develop what I think is absolutely vital for Alberta and that is to find a cure for the shut-back of 60% of our oil produced.

Now, the directors of Canadian Shell are Mr. Ash of Toronto, Mr. Barr of Toronto, I.D. Davidson, Toronto, F.J. Stephens, London England, J.L. Loudon, London England, F. Schapers of the Hague, Holland and Mr. Grafstrom of Toronto.

MR. ASH: Right.

MR. FRAWLEY: Can you give me the directors of Shell, the Delaware Corporation?

MR. ASH: I can, outside of this meeting, I do not have it in my possession here.

MR. FRAWLEY: Can you give me the directors of Compania Shell di Venezuela?

MR. ASH: The same answer applies.

MR. FRAWLEY: That company is also owned by Canadian Shell.

MR. ASH: Yes.







MR. FRAWLEY: I see that last year the president of Shell Company was Mr. I.D. Davidson.

MR. ASH: Last year, yes.

MR. FRAWLEY: Mr. I.D. Davidson is now living in Toronto and he is on the Board of Shell of Canada and also on the Board of Canadian Shell which owns Shell of Canada and Compania Shell di Venezuela.

MR. ASH: And he is president of Canadian Shell.

MR. FRAWLEY: And Compania Shell di Venezuela and Shell of Canada are blood brothers.

MR. ASH: That is your expression, sir.

MR. FRAWLEY: In the Shell family?

MR. ASH: Yes.

MR. FRAWLEY: That is right. I put it to you that Canadian Shell directs the policy for Shell of Canada, for US Shell and for the Venezuelan Shell?

MR. ASH: No, sir.

MR. FRAWLEY: Why do you say no to that?

MR. ASH: The policy of those companies is set by their respective Board of Directors.

MR. FRAWLEY: The common interest, though, funnels into Canadian Shell, is that not so?

MR. ASH: Yes, I think so.

MR. FRAWLEY: Canadian Shell is sitting owning, having a majority interest -- no, not owning,





perhaps the interest is not complete -- by the way,  
does Canadian Shell own Shell of Canada entirely or  
only in part?

MR. ASH: Entirely.

MR. FRAWLEY: Which owns 50% of Shell of  
Canada and the other 50% is owned by Shell of  
Delaware and Shell of Delaware own 65% of Canadian  
Shell so it is not wrong to use the word for con-  
versational purposes, own.

MR. ASH: Right.





MR. FRAWLEY: So that Canadian Shell owns Shell of Canada, US Shell and Venezuela Shell, and I put it to you that in any important matter of policy, in any important matter of conflict, the policy between Shell of Canada and Venezuela is that the situation would be resolved where I would expect it to be resolved, and that is by the Board of Canadian Shell.

MR. ASH: No.

MR. FRAWLEY: Where would it be resolved?

MR. ASH: On the Board of Shell of Canada, in which the shareholders are represented.

MR. FRAWLEY: What is the purpose of Canadian Shell going to Shell of Canada if they have not something for reversing a policy decision of Shell of Canada?

MR. ASH: You must not overlook the fact that if you look at our Board you will see that we have two directors from Canadian Shell, Grafstrom and I.D. Davidson, and the rest are our own directors, and then two directors of Shell Oil of Delaware which has an outside public stock ownership, and we could never make a decision which was not in accord with an outside stockholder. It would not be a family decision but a decision in line with the outside interests of the stockholders in the street. Do I make myself clear?

MR. FRAWLEY: Yes, indeed you do. But I







suggest that if you own a company, without offending the feelings of the stockholders in the street, in the case of a conflict Canadian Shell is going to have a large voice in settling the problem.

MR. ASH: With two directors out of eight.

MR. FRAWLEY: Surely the shareholders have something to say about it?

MR. ASH: That is exactly what I said about the outside shareholders.

MR. FRAWLEY: Ultimately Canadian Shell Limited is responsible 60% to Royal Dutch Shell and 40% to U.K. Shell.

MR. ASH: Well, it is owned.

MR. FRAWLEY: And to the extent that you are responsible to your owners, you are responsible 60% to Royal Dutch and 40% to U.K. Shell.

MR. ASH: To that extent.

MR. FRAWLEY: And I put it to you that the same kind of decisions are involved as to whether California or Alberta crude is going into Puget Sound, that that is a decision which, in the nature of the interlocking relationships between these Shell Companies, is not entirely for decision by Shell of Canada, it is a matter for decision by Canadian Shell on the way and ultimately by the owners, Royal Dutch and U.K. Shell.

MR. ASH: Absolutely not, sir.





MR. FRAWLEY: And I put it to you that whether Venezuela crude goes into Montreal or Alberta crude goes into Montreal is something that must be settled in the light of the interests of Compania Shell di Venezuela on the one hand and Shell of Canada on the other hand.

MR. ASH: It is entirely a decision for Shell of Canada.

MR. FRAWLEY: And if that decision was made by Shell of Canada as to Alberta crude and it was contrary to the interest of the parent company, Canadian Shell, they could overrule that decision and tell you to keep taking Venezuelan crude.

MR. ASH: No, it could not. If we make a decision to bring Alberta crude into Montreal, then it cannot be overruled by anybody else.

MR. FRAWLEY: If the stockholders decide to vote against it.

MR. ASH: I suppose they could be upset by the stockholders, theoretically.

MR. FRAWLEY: Is everything so lovely in the Shell organization that you never have to go to the stockholders to settle any major matter?

MR. ASH: The major problems of the company are settled by the Board of Directors.

MR. FRAWLEY: And you never ask to have them confirmed by the stockholders?

MR. ASH: No, except those decisions such





as a change in the size of the Board which we would have to have ratified by the stockholders.

MR. FRAWLEY: Will you tell me now how much improvement in the situation will come as far as Shell is concerned, how much improvement in the Alberta crude shut-back situation will come if and when you go into refining at Bronte? You say that by 1961 you will be putting 125,000 barrels daily into Puget Sound. That is your estimate, isn't it?

MR. ASH: That is the estimate.

MR. FRAWLEY: And that is for Shell alone, is it?

MR. ASH: No, sir.

MR. FRAWLEY: That is your estimate of the total Alberta crude that will be going into Puget Sound in 1961.

MR. RITCHIE: I might add that that estimate is not our estimate, that is the estimate of what goes into the States made by our US company after a good deal of investigation, and it was their best estimate.

MR. FRAWLEY: And you told us that 90,000 barrels daily will be going into Vancouver in 1961.

MR. RITCHIE: That was correct.

MR. FRAWLEY: And that was for all refinery needs in the Vancouver area. Now, what is the figure for 1961 in Ontario, because if you gave it I didn't get it down?







MR. RITCHIE: I think that is one of the areas in which we agreed to send some data because we did not have it. We will give the Commission that information. We could not do that without collaboration, because by 1961 we were not sure what the other companies would have by way of capacity.

MR. FRAWLEY: I wondered if we could have any figure as to what the situation will be compared to the present potential of 227,000 barrels daily to what other development will come later. Have you made any estimate at all as to what it may be then by increasing that estimate of 35? Have you made any estimate of what that 35 might become by 1961?

MR. RITCHIE: We have shown the trend of what is happening in Ontario and indicated that this would continue and was a healthy situation as far as the take-over of Canadian crude in the Ontario market. We did not, frankly, give figures of the forward demand.

MR. FRAWLEY: There isn't any doubt about this, that continuing refining in Toronto, the Alberta crude would still permit Montreal to refine your own crude brought in from Venezuela.

MR. RITCHIE: Yes.

MR. FRAWLEY: And I put it to you that these kind of decisions, those two decisions, putting Alberta crude into the new refinery at Bronte and continuing to put Venezuelan crude, your own Venezuelan crude,





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into Montreal, are decisions made by Canadian Shell rather than by Shell of Canada.

MR. RITCHIE: I put it to you, sir, that that is absolutely incorrect.

MR. FRAWLEY: For the reasons you have just stated, that the Board of Directors settle everything without reference to the owners.

MR. RITCHIE: Right.

MR. FRAWLEY: Thank you, Mr. Chairman.

---A short recess.





THE CHAIRMAN: Gentlemen, we shall now resume the hearing. Mr. Pattillo?

MR. PATTILLO: Thank you, Mr. Chairman.

Mr. Ash, I just have one question to ask in connection with oil before we go over to the gas situation.

From your experience in the oil business, do you agree that the refiners' spread in the Montreal refineries is higher than any other refinery spread in Canada?

MR. ASH: No, I do not, sir.

MR. PATTILLO: Now, Mr. Kartzke, I would like to ask you a few questions about gas. You have given us some figures as to the company's estimate on reserves of gas and I would like, for the record, to just get clear on what we are talking about. Are we talking about proven reserves, are we talking about proven plus probable? Would you please explain that to us?

MR. KARTZKE: In the table where we compare our estimates of reserves with those of the Conservation Board, we are talking about proven plus 50% of our estimate as probable.

MR. PATTILLO: And you are, in speaking of proven and probable, using both those in the same sense as the Canadian Petroleum Association did in its brief?

MR. KARTZKE: I think that is correct,







yes, sir.

MR. PATTILLO: Now, you have said, in your brief, that you have doubts as to the desirability of the thirty-year reserve test that has been invoked, but you do not offer a formula which you think should be applied.

Would you give us your ideas as to what formula should be applied in determining whether or not, at any particular stage, an export permit should be granted?

MR. KARTZKE: Yes, Mr. Pattillo. I could probably do this better by drawing you a picture, but I will do the best I can by words.

In considering this problem, the first thing that comes to your mind would be to plot the trend of growth of reserves against years and then plot the trend of growth of markets, that would be local markets, markets of crude export projects and so forth, and the difference presumably would be the amount of reserves which would be available for granting future permits.

That method of analysis, however, has several drawbacks: one, you are comparing an estimate (and these are rather long-term estimates) of growth of markets and a growth of reserves, and you are taking the difference. The difference, therefore, is very sensitive to errors in estimation of both of them. Furthermore, the growth of





reserves is quite sensitive to the growth of markets, so, in addition to having errors in estimating, you may have errors introduced by one factor influencing the other factor.

For that reason we do not feel that that method -- although it was quite logical -- is the best method, and we suggest to the Commission that it might consider the use of current reserves and current markets. By that I mean you would allocate to the projects for the use of gas a supply sufficient for them to make a project feasible, which might be of the order of 25 or 30 years, at the current rate at which they are prepared to contract for the gas.

That method would probably, in the case of Alberta, require an agreement between exporters and the local utility, to give the consumer of Alberta a priority over all export gas. But, other than that, we can see no great difficulty in using that method of approach rather than the method of approach of a 30 year rolling supply.

MR. PATTILLO: I wonder, Mr. Kartzke, if you would have somebody in your department -- I know you are going away -- if you could have somebody in your department file with the Commission the pictures you have just been trying to put into words, so that using illustrative figures we can have exactly what you are stating.





MR. KARTZKE: We will be glad to do so.

MR. PATTILLO: Now, you do not say anything, in your brief, about the matter of pricing of gas. You complain about the inadequacy of price in, for instance, the Jumping Pound field, but have you views -- and, if you have, would you please express them -- as to what policy should be followed as to the pricing of gas, first, for export?

MR. KARTZKE: We would like to see a competitive situation exist so that the price will be one which is arrived at by purchasers competing to buy gas from producers.

MR. PATTILLO: And so far as the export of gas from the country is concerned, have you any views as to what price should be received at the border?

MR. KARTZKE: By "at the border", Mr. Pattillo, I am not quite sure what you mean by that.

MR. PATTILLO: Well, when the gas comes to the border, as in the case of Westcoast at Sumas, and, in the case of Trans-Canada, at Emmerson, we know, in the case of Westcoast, what the contract price is at that point; we know, in the case of Emmerson, what the proposed contract price is.

Now, has your company any views or have you, personally, any views as to whether there







should be any policy followed whereby the price cannot be less than a certain figure arrived at by a formula?

MR. KARTZKE: No, not as to a particular price.

When I say we would like to have a competitive situation exist, I mean that we would like to have people, more than one, competing to buy our gas; therefore, we assume that we will get the highest price it is possible for any purchaser of gas to pay us.

We would naturally not enter into a contract with anyone that would not return a price which would give us a fair profit on our investment.

MR. PATTILLO: Has your company any views (assuming that you did have this competitive price structure that you are talking about, various purchasers bidding for your gas) as to whether or not the competitive factor should be in any way controlled insofar as the consumer in Alberta is concerned?

MR. KARTZKE: No, we would feel that the consumer in Alberta would be one of the competitors endeavouring to buy our gas.

Did I answer your question, Mr. Pattillo?

MR. PATTILLO: Yes, you did. Now, in the case of the gas which your company has, what proportion





of it is associated gas?

MR. KARTZKE: A very small proportion.

MR. PATTILLO: And do you consider that there is going to be a serious problem in Alberta arising out of the quantities of sulphur and LPG's and others that will be coming on the market, in making gas available for export either to Trans-Canada or to the United States?

MR. KARTZKE: There are going to be a good many problems associated with the use of sulphur and LPG's, but we do not believe there are any problems which we are not going to be able to handle, as an industry.

MR. PATTILLO: Do you anticipate that they should be handled by the producers or by the transmission companies, such as Westcoast?

MR. KARTZKE: Well, I think that they would probably be handled by both.

MR. PATTILLO: Mr. Kartzke, has your company made any study of the eastern Canadian market as a market for natural gas?

MR. KARTZKE: No.

MR. PATTILLO: Has any study been made by your company as to what possible effect the sale of natural gas in Ontario and Quebec could have on the market for the sale of oil products?

MR. ASH: Yes.

MR. PATTILLO: Would you develop that for





me and tell us what you have found?

MR. ASH: I can't, at this point, sir.

I can give you a report, if you wish it.

MR. PATTILLO: If you would file that.

MR. ASH: Yes, sir.

MR. PATTILLO: I would like to ask a couple of questions regarding your views on the Energy Board. First of all, do you think that there should be any authority in Canada that would have control over the price at which gas can be exported from the country?

MR. KARTZKE: No.

MR. PATTILLO: You do not think there should be any body reviewing that price at all?

MR. KARTZKE: As I say, with our view that we hope for a competitive situation, we do not think there is any necessity for such power in a Board.

MR. PATTILLO: I am not talking about the price at the wellhead. What I am talking about is the price at which the gas can be exported out of the country.

Have you given any thought to that, or do you still think that should be also a matter of private negotiation, without regulation?

MR. KARTZKE: No, I think, Mr. Pattillo, our position is that we do not think that the prices should be regulated at the border.







MR. PATTILLO: Do you consider that the question of tariffs to be charged for the transmission of gas, or the transmission of oil, should be the subject matter of review by any regulatory body?

MR. KARTZKE: Yes.

MR. PATTILLO: You think that they should be?

MR. KARTZKE: Yes.

MR. PATTILLO: Have you any views as to the desirability of there being restrictions on producers or refiners having any share interest in pipeline corporations?

MR. KARTZKE: No, I don't think we think there should be any restrictions in that regard.

MR. PATTILLO: Do you think it is in the interest of the national economy for the share control of pipeline corporations to be in producers or refiners?

MR. KARTZKE: I think that would depend entirely on the circumstances in the particular pipeline.

MR. PATTILLO: Well, then, do you mean that pipeline corporations should be reviewed by some regulatory body, even to the extent of their share interest?

MR. KARTZKE: Well, I can visualize circumstances where that might be necessary, yes.





MR. PATTILLO: Mr. Ash, if you have some views, I would like you to tell all of us.

MR. ASH: Mr. Kartzke has expressed them extremely well, thank you, sir.

MR. PATTILLO: Would you gentlemen care to tell the Commission why you want to leave the situation as it presently exists insofar as the control of the Board of Transport is concerned?

MR. ASH: I am not sure that we said exactly that, Mr. Pattillo. I think our position would be summed up this way, that we feel that the machinery -- I will have to go further back than that: we absolutely agree and support the thesis that the Parliament of Canada should lay down the policy in regard to energy, of whatever sort.

We do feel, as far as the oil and gas industry is concerned, as one member of it, that the machinery, both in the provinces and in the Dominion, exists to administer that policy, if properly used.

I think you used the expression "The Board of Transport as at present," did you not, sir?

MR. PATTILLO: Yes.

MR. ASH: I believe there is room for improvement and a more specialist membership and approach, shall we say, in the Board of Transport Commissioners towards oil and gas than there is





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at the present time. It is a Board which, largely,  
has had experience in railroading and we feel that  
oil and gas required a specialist's attention.







MR. PATTILLO: If you agree to that, Mr. Ash, then would you not think it proper to create a board which would have a specialized knowledge and would be able to deal with all forms of energy?

MR. ASH: That is right but the point I would argue very strongly against -- my own belief is that it is better to use the existing machinery and, if necessary, improve it. If you like, I can concede the possibility that the job could be done by a specialized board but I do not like the idea of a new bureau; I would rather see it carried on by the existing bureau.

MR. PATTILLO: I would like, Mr. Ash, if you would do this for us: if you would undertake to make inquiries of your associate and affiliate companies with the object in mind of filing with the Commission the following information: the finding, developing and lifting cost of your affiliate companies in Venezuela and in the Middle East and I would like your undertaking that your company will file its finding, developing and lifting costs of oil in Canada.

MR. ASH: There are certain difficulties; not difficulties of private corporate information but mechanical difficulties and I would like Mr. Kartzke to describe to you what they are.

MR. KARTZKE: Mr. Pattillo, we would be





happy to provide you with such figures but those figures are of a very variable nature. We would like to know a little bit more as to what you mean by finding costs? In other words, are you including such things as overall company overhead and all of the other things that go with running an oil business. We would also like to know what period because the finding costs of an oil company will vary very much dependent upon the period considered.

MR. PATTILLO: I accept that, Mr. Kartzke. What I have in mind was this: I assume, as an integrated operation, you run the biggest of the companies, there are certain costs allocated to the producing department. I would be willing that you use any of the costs including general overhead or a percentage of general overhead you allocate to the producing department as part of your finding costs. In other words, you would be preparing figures which I would expect you to be submitting to your Board of Management if the Producing Department was a solely separate company as it was up until a short time ago.

MR. KARTZKE: And for what period, Mr. Pattillo?

MR. PATTILLO: On the question of period I would think this: if we had a period of, say, three or four years. I would like it for all three areas.

MR. ASH: Do you mean the last three or





four years?

MR. PATTILLO: Yes.

MR. ASH: Very good, sir, we will do our best.

MR. PATTILLO: Now, the other thing I neglected to ask for yesterday is this: the products pipeline that runs from Montreal to Toronto and beyond, is it a separate corporate entity?

MR. ASH: Yes, sir, it is a separate corporate entity.

MR. PATTILLO: Does it have an annual report, financial statements?

MR. ASH: Yes, sir.

MR. PATTILLO: Would you please file those for the last four years?

MR. ASH: You understand, sir, this is not my company.

MR. PATTILLO: But as a shareholder having 33 1/3%, you probably have the data that you need.

MR. ASH: I will do my best to persuade the other two shareholders.

MR. PATTILLO: They are going to be here next week and I will help you.

Now, I just want to clear up one thing in the record. Yesterday you told me, Mr. Ash, that Shell Company of Canada, Limited, was a private company and you have undertaken to supply to the Chairman its financial statements. Am I







correct in thinking that that company has only recently become a fully integrated company and up until a short time ago it was a refining/marketing company only.

MR. ASH: Refining, marketing, transportation.

MR. PATTILLO: And it recently acquired the producing business of Shell Company carried on in Western Canada.

Has the company a public debt in the way of first mortgage bonds or debentures?

MR. ASH: Not directly. Perhaps I should pass this over to our treasurer but I might say that such bonds as we have are in respect of our office building in Toronto. I will let Mr. Ross deal in detail with that.

MR. ROSS: The only direct indebtedness of the company as of a public nature is the position of the financing of our office building in Toronto. Bonds were issued on the security of the building.

MR. PATTILLO: Where does the company get its necessary working capital funds? Does it get them by the present shareholders, that is Canadian Shell and Shell of Delaware, subscribing for shares or by cash advances or how?

MR. ROSS: It has been done in both ways but primarily by cash advances secured by the company's notes.





MR. PATTILLO: Mr. Chairman, I have no further questions.

THE CHAIRMAN: Mr. Frawley?

MR. FRAWLEY: Mr. Chairman, with your permission, I do not propose to ask Mr. Kartzke any questions about the gas business but I would like, with your permission, to discuss with Mr. Ash, very briefly, the answer which he gave to Mr. Pattillo after I concluded. The question by Mr. Pattillo was, "From your experience in the oil business, do you agree the refinery spread in the Montreal refinery is higher than any other refinery spread in Canada?" and your answer was, "No, I do not, sir". Are there any other refinery spreads in Canada that you know of that are higher and, if so, which refineries are they?

MR. ASH: I know of no spreads that are higher.

MR. FRAWLEY: Mr. Chairman, it was Mr. Ritchie who was answering my questions about tank-waggon prices. I should have completed them and I would like to do that now. I am again reading from Imperial posted prices, National Petroleum News, April, 1958, page 195 and will continue. I only gave you regular gasoline but I will now give you kerosene. At Montreal the posted tank-waggon price of kerosene, 25.6¢. Posted tank-waggon prices, Toronto, 25.8¢. Furnace oil (No. 2 fuel) tank-waggon





price at Montreal is 18.3 and the tank-waggon price at Toronto is 18.3. Just to put them down in this context I will repeat that the regular posted price, tank-waggon, of gasoline is 22.6¢ at Montreal, 22.8 at Toronto.

With those figures, Mr. Ash or Mr. Ritchie, you still say that that is not, and I am only interested about Toronto and Montreal -- I do not know anything about the refinery spread at Vancouver, Calgary, Edmonton or any other place -- I am only interested in the refinery spread of Redwater crude at Toronto versus Venezuelan crude at Montreal and whether or not the refinery spread at Montreal is more or less than the refinery spread at Toronto.

MR. RITCHIE: You still do not have the full list of products.

MR. FRAWLEY: No.

MR. RITCHIE: You left out one very important element which is heavy fuel and you should take into account the return of heavy fuel at Montreal and Toronto. Frankly, I do not have the calculations to determine the answer to your question.

MR. FRAWLEY: You would say, Mr. Ritchie, this information is of very considerable importance in arriving at an evaluation of the refinery spreads at Toronto and Montreal.

MR. RITCHIE: By important, you are saying







this is the market?

MR. FRAWLEY: This is the market where you have indicated one item that is missing and I am suggesting this is of some considerable importance in arriving at an evaluation of the spread.

MR. RITCHIE: It is a factor.

MR. FRAWLEY: Let me ask you this: you are able to, of course, give the Commission the precise refinery spread at Montreal.

MR. RITCHIE: Not by products, sir.

MR. FRAWLEY: Not by products.

MR. RITCHIE: No, sir.

MR. FRAWLEY: How does one establish the refinery spread?

MR. RITCHIE: When I say not by products, sir, I think you would have to get an analogy to something less complex than a refinery. In other words, what element of cost do you charge to a specific product and that is a matter of cost accounting and you can ask half a dozen different cost accountants and come up with half a dozen different answers.

MR. FRAWLEY: I thought there was an accepted way, accepted by the American Petroleum Institute, as to how to cost petroleum products.

MR. RITCHIE: I would like to hear it. We would be delighted to have an accepted way.

MR. FRAWLEY: At the moment, it is of





importance to determine and nobody knows, at all, what the refinery spread is. Is that the situation?

MR. RITCHIE: That is not what we said, sir. I was talking about by-products. On by-products you cannot determine specifically. You follow me, of course?

MR. FRAWLEY: I would be less than frank if I told you that I did not follow you at all. What I would like to know, for the information of the Commission, because, Mr. Chairman, this is not idle questioning as far as I am concerned. We have been talking about dangers. The argument that has been put up, perhaps I was wrong and I regret it, as an argument, inter alia, by the people opposed to going into Montreal and pointing out what would happen, I would say, by the figures I showed this morning, there is nothing in that argument and now, perhaps, that is the last word and if there is a later word, I suggest the Shell Oil Company, the Montreal refining company, file with the Commission information that will refute what, on the surface, at least, looks like a much bigger refinery spread in Montreal than is enjoyed by the Toronto refinery.

I only occupy a very unimportant position here as counsel for the Alberta Government but I would say, in all seriousness, that should be done. It is an important factor that enters into the economics of putting Alberta crude into the Montreal market and





with all respect, sir, I do not think it should be left and I think the Shell Oil Company should be asked and let me use the word and I am not using it in any unfriendly sense, to adjusting the apparent difference between the refinery spread in Toronto using Redwater crude and the refinery spread in Montreal using Venezuelan crude. I only do that because you gave such a categorical "no" to my friend Mr. Pattillo. You did not agree it was higher than any refinery spread in Canada and I would like that followed up and would like to know what are all the other refinery spreads in Canada to enable you to say whether this is not. If I am wrong, could you file with the Commission the information which will demonstrate I am wrong.

THE CHAIRMAN: May I put it on a little different basis. I am sure Mr. Ash will undertake to file with the Commission such information if the Commission, in its judgment, feels that it is necessary or desirable for the Commission to have that information with respect to any possible recommendation which the Commission might be called upon to make.

MR. FRAWLEY: Mr. Chairman, I am entirely in accordance with that.

THE CHAIRMAN: I am sure Mr. Ash will agree.

MR. ASH: I will file such information







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as we can give you. First of all, I must mention that we do not refine at Toronto.

THE CHAIRMAN: It can, obviously, only apply to your own operation.

MR. ASH: I do want to repeat that it is impossible to give a spread of the by-products because there are different by-products at different refineries. One could take as a striking example that one refinery is producing petrochemicals and the other is not and the same goes right down the line of products.





THE CHAIRMAN: Well, the Commission is certainly not going to take the position that you would refrain from giving the Commission the information that you have on it, and if and when the Commission considered it desirable to have this information, we will request it, and I assume that it will be forthcoming.

MR. ASH: I think I already said we would do so, sir.

THE CHAIRMAN: Does that meet your point, Mr. Frawley?

MR. FRAWLEY: Yes, indeed. Thank you.

MR. COMMISSIONER HOWLAND: Mr. Ash, I have a rather general question. There is some indication that over the years the export of energy has been treated as though it is a rather special product. In the normal course of events, Canada has been quite prepared to export anything anywhere. On the other hand, there seems to be inherent in the legislation and in suggestions to this Commission some hesitation about promoting without some limitations on this export of energy. What is your general reaction to this subject of export of energy?

MR. ASH: Promoting the export of energy.

MR. COMMISSIONER HOWLAND: Would you not put any reservations on exporting energy or sources of energy?

MR. ASH: Insofar as we have spoken of gas





export, as our brief says, it would be vital, we have very clearly said the needs of the Canadian market must be protected first, and until then -- that is long-term. Mr. Kartzke could answer this.

MR. COMMISSIONER HOWLAND: Mr. Karzke, I believe you said that you felt that there shouldn't be any price control on exports. In other words, you do not agree with the present legislation which seeks in some way to ensure that the prices to Canadians in comparable volumes and so on shall not be higher to American customers.

MR. KARTZKE: Dr. Howland, I meant to give the impression -- I will try and do it now -- that in a competitive situation, which we definitely advocate, I don't think that such a disparity in prices will exist.

MR. COMMISSIONER HOWLAND: At the present time you feel that there is no competition.

MR. KARTZKE: In some areas, that is right.

MR. COMMISSIONER HOWLAND: Which are they?

MR. KARTZKE: Well, the two pipelines that move gas out of the Province of Alberta at the present time are not competitive, so there is no competitive price in Alberta.

MR. COMMISSIONER HOWLAND: I am very interested in this. I have been trying to follow your reasoning, Mr. Kartzke, on the question of pricing; it is a fascinating subject to me. In reply to Mr.







Pattillo yesterday when he asked you I think you led with your chin a little about being happy to define a price for oil. It is on page 4588 of yesterday's evidence. Your reply to the proper price for oil didn't seem to follow the classical economics of your brief. It did indicate rather a negative reply in the sense that you thought a proper price was not to be determined by competition. I will read it to you.

MR. KARTZKE: Yes, please.

MR. COMMISSIONER HOWLAND: You said: "Yes, I will be happy to." This is in regard to defining a proper oil price. "In Texas, as we know, when there was a great amount of distress oil on the market it was necessary " - I take it it was thought necessary - "by some people and by some operators to market the product at away below any price at which even those people could make a profit, and I think that is fundamentally a bad situation. Now, under the normal competitive situation presumably some people would go broke and the price would be adjusted to those who could prosper. When you came today to discuss the price of gas, in one case you seemed to want limited competition, in the other you seemed to want full play of competitive elements. Is this correct or is my impression wrong?

MR. KARTZKE: No, I think my -- I hope my position is still logical.





MR. COMMISSIONER HOWLAND: I am quite sure it is logical, but I don't want to hook you on to a reply you gave very rapidly yesterday. If you would like to enlarge on what you set the price of oil I will be very glad to listen. You seemed to indicate you wanted full competition on the one hand and limited competition on the other. Now, which do you want, the full force or limited competition?

MR. KARTZKE: I think we want full competition. The point I was making yesterday was that when you allow a distress situation you get a very unusual situation, and perhaps for unusual obligations an operator may be willing to sell his product at what I term an improper price; by that I mean that in order to get out of a particular situation he may price his product below what it costs him.

MR. COMMISSIONER HOWLAND: Well, is this abnormal in a competitive situation in industry?

MR. KARTZKE: Perhaps it is not abnormal in industry. If we can go back to the gas situation where you are starting by competing for a product, I would not normally expect anybody to be put into the position of having to go to such lengths.

MR. COMMISSIONER HOWLAND: Well, let's follow through a little more, if we may. I am just trying to find out what principles are involved here.





If you assume the free play of marketing forces in setting the price, surely here we are going to assume that the entry into the United States market, for instance, is an economic problem rather than the political-cum-economic problem. Is this correct?

MR. KARTZKE: I would say that the entire problem of moving gas into the United States was entirely an economic problem.

MR. COMMISSIONER HOWLAND: If you are going to have a free play of competition -- this is the assumption you make; is that right?

MR. KARTZKE: Yes.

MR. COMMISSIONER HOWLAND: Is this a fact?

MR. KARTZKE: Well, it hasn't been a fact in the past.

MR. COMMISSIONER HOWLAND: Do you think it will be in the future?

MR. KARTZKE: Well, I would hope that the economic situation would become more important and the political situation less important in the future.

MR. COMMISSIONER HOWLAND: But the Government of Canada has now a responsibility to the industry to try and ensure that this is a fact.

MR. KARTZKE: That is a fact.

MR. COMMISSIONER HOWLAND: That the entry into the United States is, as far as possible, a matter of economics.

MR. KARTZKE: I think the Government of







Canada undoubtedly has a responsibility in that direction.

MR. COMMISSIONER HOWLAND: Another assumption, theoretically at least, in your formula of competitive pricing is that there is arms length dealing. You would agree that in order to ensure the proper pricing of gas and oil the Government should ensure that there is arms length dealing?

MR. KARTZKE: Yes, I think that is correct. By that you mean to have true competition you must have competition at arms length?

MR. COMMISSIONER HOWLAND: That is right.

MR. KARTZKE: I think that is right.

MR. COMMISSIONER HOWLAND: I think that is all. Thank you very much, Mr. Kartzke.

THE CHAIRMAN: Mr. Ash, you referred to the fact in your brief that Canada should at all times have a national energy policy. Have you any suggestions, you and your colleagues, to the Commission as to what recommendations the Commission might make on that score? You say it is very important.

MR. ASH: As to what the policy should be?

THE CHAIRMAN: Yes.

MR. ASH: Sir, this is a big subject. You have got to take into account matters such as conservation of resources, that they should be exploited, if I may use that word, and according to good engineering standards; but at the same time you have the





urgent necessity of finding markets. We believe, as we say in our brief, that there is a market waiting for petroleum for that part of it that we call gas, and we certainly hope that your Commission will recommend to the Government that the policy should be to open up the possibility of taking certain of these export markets for gas as one large step to redress, you might call it, the revenue position of our industry.

THE CHAIRMAN: I assume you would include in that the Shell's Canadian market?

MR. ASH: I don't think that is a very fair assumption, Mr. Borden.

THE CHAIRMAN: Well, for gas.

MR. ASH: Yes.

THE CHAIRMAN: It seems to me that you are in favour but you are not in favour of regulation.

MR. ASH: Shall I call it interference -- intervention.

THE CHAIRMAN: Thank you very much, Mr. Ash, and your colleagues, for an excellent brief and for your co-operation in being here yesterday and today and answering questions to the best of your ability. We appreciate very much your co-operation.

MR. ASH: We thank you, sir, and your colleagues, for the way we have been received. We appreciate it very much indeed.

THE CHAIRMAN: Gentlemen, the hearing will





now adjourn. We will meet on Monday morning in this room at 10 a.m., at which time I believe, Mr. Parkinson, Imperial Oil Limited will present to the Commission its submission.

MR. PARKINSON: That is correct, Mr. Chairman.

---Whereupon the hearing adjourned, at 12.20 p.m., until 10 a.m., Monday, May 5, 1958.





# ROYAL COMMISSION

ON

## ENERGY

HEARINGS

HELD AT

CALGARY

ALTA.

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# ROYAL COMMISSION

ON

ENERGY

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Hearings held at Calgary,  
commencing Tuesday, April  
29, 1958, at 10.00 a.m.

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## PRESENT:

Mr. H. Borden, C.M.G., Q.C.	-- Chairman
Mr. J.L. Levesque	-- Member
Mr. G.E. Britnell	-- Member
Dr. R.D. Howland	-- Member
Mr. L.J. Ladner, Q.C.	-- Member
Dr. R.M. Hardy	-- Member

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## COMMISSION COUNSEL:

Mr. A.S. Pattillo, Q.C.	
Mr. Miles H. Patterson.	
Mr. J.F. Parkinson	-- Secretary to the Commission.
Major N. Lafrance	-- Assistant Secretary to the Commission.







APPEARANCES:

Representing Imperial Oil Limited:

Mr. J. R. White - President, Director

Mr. J. A. Cogan - Vice-President, Director

Mr. W. O. Twaits - Executive Vice-President,  
Director

Mr. W. D. Mackenzie - General Manager Producing  
Department, Director

Mr. J. K. Jamieson - Vice-President, Director

Mr. J. W. Hamilton,  
Q.C. - Director

Mr. R. M. Crockett - Manager, Economics Dept.

Mr. F. G. Cottle - Manager of Transportation  
and Supply

Mr. J. D. Harvie - Manager of Producing  
Economics

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EXHIBITS

<u>No.</u>	<u>Description</u>	<u>Page</u>
CC-5-1	Opening statement of Imperial Oil Limited by Mr. J. R. White	4682
CC-5-2	Submission of Imperial Oil Limited	4682

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Monday,  
May 5, 1958.

---On resuming at 10.00 a.m.

---Mr. Commissioner Ladner was not present.

---Mr. Commissioner Hardy was not present.

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THE CHAIRMAN: Gentlemen, the Commission will now resume its hearings. Mr. Pattillo?

MR. PATTILLO: Mr. Chairman, we are going to hear from Imperial Oil this morning, and they have filed with us both an opening statement by Mr. White and a written submission. I am proposing that the opening statement be marked CC-5-1 and the written submission be marked CC-5-2.

SUBMISSION OF  
IMPERIAL OIL LIMITED

APPEARANCES:

Mr. J. R. White, President, Director

Mr. J. A. Cogan, Vice-President, Director

Mr. W. O. Twaits, Executive Vice-President,  
Director

Mr. W. D. Mackenzie, General Manager Pro-  
ducing Department,  
Director

Mr. J. K. Jamieson, Vice-President, Director

Mr. J. W. Hamilton, Q.C., Director





Mr. R. M. Crockett, Manager, Economics Dept.

Mr. F. G. Cottle, Manager of Transportation  
and Supply

Mr. J. D. Harvie, Manager of Producing Economics

---EXHIBIT NO. CC-5-1:      Opening statement of  
Imperial Oil Limited  
by Mr. J. R. White

---EXHIBIT NO. CC-5-2:      Submission of Imperial  
Oil Limited

MR. PATTILLO:      Mr. White, the President  
of the Company is here and I will ask him to intro-  
duce the members of his group to the Commission.

MR. WHITE:      Mr. Chairman, may I say first  
that we have been very pleased to see this develop-  
ment of the Commission to look into the sources of  
energy of the industry and we have given considerable  
thought to our brief and you can see by the number of  
our people who are here that we are taking an active  
interest; sixty per cent of our Board is here and  
if I may I would like to introduce them to you.

On my left is Mr. Cogan, Vice-President  
and Director of the Company.      On my right is Mr.  
Twaits, Vice-President and Director.      Mr.  
Mackenzie, General Manager of the Producing Depart-  
ment and Director of the Company.      Sitting behind  
are Mr. Crockett, Manager of the Economics Department,





Mr. Fred Cottle, Manager of Transportation and Supply, Mr. John Hamilton, Director of the Company, and Mr. Jamieson, Vice-President and Director, and Mr. Jack Harvie, in the Calgary Office.

I do not think we will all be presenting things but we are all here to help.

If I may, Mr. Chairman, I would like to read a statement that has been prepared since arriving in Calgary. I think most of you have copies but there are still copies at the back of the room for those who have not.

Copies of our brief have been distributed and this sets forth in some detail our views on the questions you have been asked to consider. I have been much impressed, however, with the great number of factors that seem pertinent and with the detail that the Commission must absorb. Because of this, it might be constructive to make some general observations and, if possible, to marshal some of the points which are pertinent to an overall perspective, and to highlight them prior to proceeding with our formal submission.

Actually, the main concern of industry is the question of outlet for the reserves of crude oil that have been discovered and that may be expected. The current economic recession is a major adverse influence at present, but at the root of this matter lies the world oil situation.







As you know, industry has had unprecedented success in the finding and development of immense reserves in foreign areas. In contrast to this, the United States industry has had to scratch diligently to discover through new fields and extensions of older ones, the oil that their economy consumes annually. Were Canada and the United States considered as a single economic unit, as indeed they are a single geographic unit, the continental industry could develop with a common target of supplying North American Requirements for oil in the most logical manner.

The Canadian oil industry has grown perhaps more rapidly than the oil industry in any other single area in the last eleven years. It would hardly be reasonable to anticipate that the percentage growth of the Canadian industry can be maintained indefinitely. There is obviously some geographic limit beyond which we cannot go in the search for new markets. However, the Canadian industry will develop large additional volumes of outlet with the growth in demand in those large markets it is economically fitted to serve.

Much of the Commission's time in Calgary has been devoted to the consideration of a specific proposal to enlarge the sphere for marketing Canadian crude. This involves reserving the Montreal market for this purpose. Incidental to





this is a major extension of the pipe line system. In considering this proposal, it might be helpful to the Commission if we could set forth a number of points on which we believe the industry, despite its various viewpoints, could agree.

First of all, there seems to be no argument that in order to develop fully the producing potential of Western Canada, we will need substantial export markets, in addition to any foreseeable domestic market.

Secondly, I believe it has been clearly brought forth in the submissions to date that Montreal is not an obvious market and that Canadian crude can only get into this market by way of crude and product import quotas or restrictions of some kind.

Thirdly, we would agree with the views already expressed here that further reductions in wellhead price of Canadian crude in relation to other areas is not desirable and could be harmful to exploration incentive.

Fourthly and finally, we can all agree that the principal difficulty in extending the market for Canadian crude is because of the competition of low cost foreign oil and that such competition becomes more acute the further Canadian crude has to be transported.

The above points, I think, may be accepted





as a common starting ground.

At this point, I would like to refer to a new term that has crept into discussions here. This term is "commercial preferences." I don't believe people using the word wish to abandon the profit and loss system, or repeal the laws of economics, but there seems to be something vaguely disreputable about it.

As used, however, and applied to our own Company, it seems to infer that Imperial is concerned with maintaining a vested interest -- inferentially, that of some corporate affiliate in the Montreal market. I felt this implication sufficiently serious to mention it at our Annual General Meeting of Shareholders on April 25th, denying it in the strongest terms. This denial in some respects is unnecessary, since our attitude in this matter has been amply borne out by our record of market development in Western Canadian crude, all of which has backed out foreign crude, and by our exploration activity in the St. Lawrence Lowlands and in the Maritime Provinces, which, if successful, will certainly back out foreign crude.

As far as commercial preferences go, anything we do as a Company must recognize the fact that Imperial operates only in Canada and its future depends on the prosperity and well being of this country.







Our position on the Montreal market is simply that it has the attraction of large volume, but it has certain important disadvantages relating to the basic non-competitive position of Canadian crude there, and the controls and trade restrictions that will be necessary to support the use of Canadian crude. In view of this, we believe it would be most unwise to conclude that steps be taken immediately to place Canadian crude physically in Montreal. The disadvantages are too important and we feel that other alternative courses of action must be fully explored.

At this point, we find ourselves in disagreement with some other members of the industry. You have heard that some do not fear the controls and regulation associated with Montreal. You have heard the expression that the security of the market and inferentially of the industry, is paramount. These are strange words coming from the oil industry. I would suggest that the oil industry started as a prospecting venture with a high degree of risk and still depends on prospecting incentives to perpetuate itself. If its rewards have been higher than some more secure industries, they have not been disproportionate to the risks involved. On the other hand, if the oil industry desires security above all else, it must be prepared to accept a lower rate of





return associated with a secure venture.

Actually markets for crude oil or products can never be really secure, because of changes in demand, supply source and even government. In our opinion it is therefore prudent to aim for those markets in which we have natural advantages, or at least the minimum disadvantage. This leads logically to the United States areas contiguous to our transportation systems.

Now we find the United States doing the same sort of soul searching that we are doing today. They too, are concerned about flush foreign production which is potentially able to undersell the American crude producer. They have erected a temporary voluntary quota fence which treats Canadian crude on the same basis as any foreign crude, without regard to the fact that our oil is produced under the same conditions of geology and pro ration as their own and consequently does not offer the same competitive threat.

Their reassessment is not limited to oil alone. It includes base metals and many other commodities. Many of these natural resources have been developed in Canada under the stimulus of United States demand and in many cases, under the stimulus of U. S. investment. They have been referred to as an invaluable supply of such materials in time of emergency.





It is indeed time that the Canadian Government and the United States Government came to an understanding on these matters. I think a simple statement to the United States Government might sound like this -- that you cannot count on Canada's resources being available to you as and when you need them, unless at the same time you are willing to buy from Canada in an amount that will permit the industries to maintain themselves in a position to produce when required. I think this understanding cannot be reached on a piecemeal basis but must cover a general area of common interest.

I feel that it is still possible for Canadian oil to be considered in the same light as U. S. domestic production, and as such given economic outlet in the United States before quota volumes of U. S. imports are determined. If agreement on this principle can be achieved, then we will have a basis on which to plan our future industry growth.

We are suggesting in our brief the possibility of an early and substantial improvement in the utilization of Canadian crude within the sphere of our present transportation systems. This obviously is the first step which should be taken. However, we still feel that added export markets are most important. It would appear that







development of these are dependent on talks between the Canadian Government and the U. S. Government, and the question of how to start this process in motion, and the timing of such action are matters to be considered. . It is possible that the Commission here may wish to consider what part, if any, it takes in this process.

THE CHAIRMAN: Thank you, very much, Mr. White. Will you proceed with the brief?

MR. WHITE: If the Commission has no objection, to avoid monotony of voice, Mr. Twaits and I are going to divide this up.

THE CHAIRMAN: Divide it up in any way you wish.

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MR. WHITE: Introduction: The submission of Imperial Oil Limited will deal in varying degrees with points A, B, C and E of the terms of reference of the Commission. Perhaps the chief value in this presentation will be derived from its description of the industry, of how the industry works, the various forces that have caused it to take today's shape, and hence some discussion as to what might improve its operations. With this background, it might be possible then to offer some suggestions on the particular points that the Commission has been asked to study.





It might be appropriate for us to define here the elements that we believe best serve the national interest in the sense used in the terms of reference of the Commission. These are as follows:

1. A high level of energy consumption by Canadians.
2. The existence of large resources of energy sources at the disposal of the Canadian economy.
3. The development of markets which will provide reasonable economic stimulus to the growth of the energy industries.
4. The development of energy resources in line with markets available to provide not only energy required but stimulus to the economic development of the country.

Our presentation is concentrated on the oil aspects of what is commonly referred to as the oil and gas industry. The identity between oil and gas exists solely in the producing and exploration phases. These two forms of energy, after production, are transported and sold under very different business systems and seldom have further contact until they meet competitively in the fuel market.

Of particular importance in this presentation is the discussion relating to the long-term as opposed to the short-term phases of the problem. These two may not necessarily be compatible, and historically long-term considerations have been the





more important.

Any value that may be derived from this written presentation is believed to lie in a reading of the discussion. This makes the preparation of a summary and conclusions more difficult than is usually the case. Such a summary, however, has been prepared and is located at the back of the book where it may serve to remind the reader of some of the more important points discussed.

The submission is divided into the following sections:

- I. The Company
- II. Characteristics of the Petroleum Industry
- III. Crude Oil Reserves, Producibility and Factors Affecting Development
- IV. Development of Crude Oil Markets and Economics of New Market Penetration
- V. The Current Decline in Crude Oil Market
- VI. Future Market Alternatives
- VII. Oil Pipe Line Financing and Regulation
- VIII. National Energy Policy and National Energy Authority.







I. Imperial Oil Limited was incorporated by letters patent granted by the Dominion Government in 1880. The Company's business is comprised of the production, refining and distribution of petroleum and its products throughout Canada. The entire assets of the Company are within Canada, and its operations extend to virtually every part of Canada. The Company's employees number approximately 14,000, and capital employed as of December 31, 1957 amounted to \$757.9 millions.

The Company is managed by a board of directors, who have the ultimate responsibility for the business of the Company. The directors, at present ten in number, are elected at the annual general meeting of shareholders, and the executive officers of the Company are the president and four vice-presidents, who are elected by and subject to the board of directors. Of Imperial's ten directors, eight are native-born Canadian citizens, one is a United States citizen and one is a Canadian citizen born in England. Eight of the directors have had more than twenty years of service apiece with the Company. All directors are full-time employees of the Company.

The Company's authorized capital is 40 million shares of no par value, of which approximately 31.5 million shares are issued and outstanding. The





Company has some 44,500 shareholders of whom 35,300 are in Canada. Standard Oil Company (New Jersey) is the largest shareholder of the Company, owning about 70 percent of the outstanding shares. The distribution of shareholders and shareholdings as at December 31, 1957 is shown in the following table:

	Shareholders		Shares	
Total	44,544	100%	31,442,652	100%
Standard Oil (N.J.)	1		21,961,395	69.8%
Canadian Accounts	35,300	79.25%	6,289,283	20%
Other	9,243	20.7%	3,191,974	10.1%

Canadian Character of Imperial: In view of the fact that a majority of Imperial Oil Limited stock is held by a United States corporation, the question may well be asked to what extent Imperial is a "Canadian" company.

This question in effect means "Are Imperial's policies determined by external considerations or does Imperial base its policies on Canadian conditions and the Canadian interest?"

We believe the record speaks for itself, and the answer is that Imperial acts as a truly Canadian company. This basis of operations has never been questioned by shareholders, large or small, since it is the only way to maximize over the years the earnings from our operation.

The only working principle on which the management of an operating company such as





Imperial can adequately function is the energetic pursuit of the opportunities in its field. The management of an operating company will have to work diligently to keep abreast of competition under the best of circumstances. If arbitrary external objectives are introduced, the ability of such a company to compete deteriorates markedly.

This is perhaps merely a restatement of the importance of decentralized management in the operation of large enterprises. While there is a great diversity in the extent to which individual concerns practise this approach, its importance is widely recognized throughout industry today. It is probable that no individual concerns have had a greater experience in the principles and practice of decentralized management than Imperial Oil and its major shareholder, Standard Oil of New Jersey.

One reason for this lies in the fact that Imperial Oil Limited incorporated in 1880, is actually older than Standard Oil Company (N.J.). Imperial's relationship with Standard began in the '90s, after Imperial had sought in vain for growth capital in Canada and the United Kingdom. Ultimately the financial problem was solved through the sale of a controlling interest to Standard Oil in 1898.

The affiliation thus initiated was, therefore, not of the parent-branch plant variety but one between two experienced oil concerns, both operating



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OFFICE OF THE DEAN

540 EAST 58TH STREET, CHICAGO, ILL. 60637

TO THE DEAN, UNIVERSITY OF CHICAGO

FROM THE DIRECTOR, MUSEUM OF ART AND ARCHITECTURE

SUBJECT: REQUEST FOR ADMISSION TO THE MUSEUM

RE: [Name of the person]

DATE: [Date]

Dear Sir:

I am writing to you regarding the admission of [Name of the person] to the Museum.

[Name of the person] is a student of the University of Chicago and is interested in the study of the history of art and architecture.

[Name of the person] has completed the necessary requirements for admission to the Museum and is now seeking your approval.

I am sure that [Name of the person] will be a valuable addition to the Museum and will contribute to the study of the history of art and architecture.

Very respectfully,  
[Signature]

[Name of the person]

[Address]

[City, State, Zip]

[Phone Number]

[E-mail Address]

[Additional Information]

[Additional Information]

[Additional Information]





in highly developed communities. American-born personnel presently on the Company's payroll number less than one percent and are confined to a few specialists who, speaking generally, have brought a wealth of experience to Canada and have contributed greatly to Imperial's progress. They have been enlisted on the basis of their personal qualifications and not in the sense of shareholders' representatives.

Imperial was for many years headquarters and majority shareholder of International Petroleum Company, operating crude oil production and exploration in South America. Only with the prospect of Imperial's own large-scale crude production, following the discovery at Leduc, did this successful international relationship come to an end.

At that time Imperial sold its International Petroleum holdings to finance Canadian development (I think we got \$18 million for it). It is worth noting that Imperial sold this foreign operation, with large established crude oil reserves in order to finance its development of western Canadian crude oil supplies, which have displaced crude oil from affiliated companies. Before selling, however, Imperial obtained assurance of continued crude oil supplies to its east coast refineries.

MR. TWAIT: II. Characteristics of the Petroleum Industry: During the twentieth century,





with the development of the internal combustion engine, automatic heating and the general increase in energy requirements, reflecting improved living standards, the oil industry has emerged as a major supplier of energy, even in countries with large coal resources, including Soviet behind the Iron Curtain. Thus in 1957 the free world used some 15 million barrels daily of crude oil and petroleum has become the largest commodity of world trade.

In this growth, the oil industry has developed an intricate and worldwide logistical system utilizing specialized transportation. Supply competition and freedom to "shop" is a predominant characteristic of the industry due to a number of factors:

(a) The production of crude oil is concentrated in a few major areas as indicated by the following table:

		Free World Figures	
		% Production	% Reserves
Middle East		23	72
Venezuela		18	7
United States			
Texas	20		
California	6		
Mid-Continent	6		
Other	<u>15</u>	47	14
Canada		3	1
Other		<u>9</u>	<u>6</u>
		100	100





(b) Widespread use of petroleum includes domestic customers, public utilities, industry and transportation facilities, requiring various specialized fuels. Major industries are frequently located on the basis of accessibility to a number of different oil sources.

(c) Great flexibility in supply is needed because of the varying demand by types of product, the important and unpredictable effect of weather, and the normally long transportation lines. Consequently, an inadequate margin of supply could result in violent price fluctuations which would not only cause hardship at the consumer level but dislocation of industry. To protect against such eventualities, surplus capacity is maintained at all stages of the industry's operation, from oilfield through the transportation network to refining and distribution facilities. Surplus capacity has been a normal characteristic of the oil industry at all times except during highly abnormal conditions of world wars.

The fact that the oil industry has been able to develop and maintain surplus capacity over many years reflects the competitive nature of the industry on the North American continent. No monopoly has been able to do this in any country where such monopoly exists, such as the Argentine, Brazil, and Mexico. At the same time, the industry has been







able to continuously enlist the confidence and support of outside capital to supplement internally generated funds in meeting the investment needs of the industry.

In Canada, since the end of World War II, capital investment by the oil industry has totalled some \$4,600 millions. While approximately two-thirds has been invested in crude oil exploration and development, investment in all phases of the industry, including transportation, refining and marketing, has been essential to supply increasing demands of the consumer for petroleum energy. This investment has been made by hundreds of companies and individuals.

Expenditures for exploration and development alone in western Canada have been currently running at a rate in excess of \$600 millions annually and net cash input is probably \$200 millions annually. This capital inflow obviously represents the investors' choice of Canadian opportunities for crude oil discovery and development rather than those elsewhere. Imperial's former interest in Latin America, and its decision to put this money into Canada, represented considered judgment between two investment opportunities. The Canadian producing industry, like every other producing area, competes for capital on the basis of profit incentive, geological prospectiveness and political stability.





Such capital is supplied to the industry by:

1. the individual investor directly, or
2. through one of his institutions.
3. by the shareholder's willingness to leave earnings in the business.

Incidentally, financial institutions and oil companies have capital to invest only so long as the individual investor retains confidence in the wise direction of their affairs.

Both individual and institutional sources of capital recognize all the fair and reasonable obligations of the oil industry: payments for the right to explore to owners of prospective oil-bearing properties, governments or individuals; royalties - a share in the profits of production; fair wages for employees and payments of taxes to local and federal authorities. Investors understand the desire of government to watch over natural resources, but are wary of regulations which may interfere with natural economic movements. Capital - the savings of the individual - is only forthcoming if a reward can be expected within a reasonable time.

If denied this by excessive taxation, unreasonable regulations or poor management, capital will turn to another industry, another country. The freedom of capital to move is its greatest asset - confine this freedom, restrict or prolong its reward and capital will no longer be available.





In summary, three petroleum industry aspects stand out: the first is competition within the industry itself; the second is the heavy capital input and the third is the importance of exploration incentive. All three are essential to maximum development of oil resources.

III. Crude Oil Reserves, Producibility and Factors Affecting Future Development: The producing phase of the Canadian oil industry, including the exploration for, and the production of crude oil and natural gas, can be assessed at a given time in terms of current reserves, producibility and net cash flow. However, future reserve development, and continuity of supply to the market depends on continuing exploration which, in turn, depends on incentive... that is the prospect of profit from future discovery.

Accordingly, future development of Canadian oil resources as a major energy source is not only a matter of the current position but even more important of the factors affecting future incentive.

The following section considers these aspects with detailed supporting material including case studies, presented in the indicated appendices.

It is first necessary to describe the "business system" in which exploration and development is conducted. The producing industry in Canada operates under certain competitive and legal concepts which can be summarized in four basic







characteristics:

- I. Sound conservation practices are observed in the production of crude. These practices include "equitable share allowable" and "market demand proration."
- II. As a practical matter, exclusive rights to explore with surface equipment cannot be obtained and surface exploration is freely done on a non-exclusive basis.
- III. Mineral rights are generally leased under a "drill-pay-or-quit" lease, the terms of which promote exploration, because:
  - (a) An annual rental serves as an economic pressure to evaluate land by exploration.
  - (b) Usually there is no obstacle to the division of the lease interests, any portion of which may be sold or traded.
  - (c) Drilling must be started (and continued) if production is found in adjoining lands.
- IV. It is the present policy of provincial governments to grant leases by generally following a pattern of:
  - (a) Granting an option (reservation) to lease half the acreage in a block of government land - provided certain exploration work is done.
  - (b) Selling by sealed tender any part of the residue of subsurface rights from (a).





(c) Granting leases whose terms promote exploration as briefly described in III.

All of these characteristics have one thing in common - they promote rapid development and exploration by the industry, because they foster intense competition. It is inherent in this situation that the oil industry explores and develops considerably ahead of available market outlet. Individual reserves cannot be retained or developed or development deferred as in the case of solid or non-migratory minerals.

With this background, we can consider the physical indices of reserves, producibility, and questions of producing economics:

Reserves (Appendix A): The reserve estimates made by the Canadian Petroleum Association and Imperial Oil Limited for crude oil are summarized below; they are considered to be in good agreement.

	Canadian Petroleum Association (Billions of barrels)	Imperial Oil Limited
Proved remaining	2.86	2.75
Probable remaining	3.68	3.77
Possible	50.	27- 45

Producibility (Appendix B): "Possible" reserves of oil will only be discovered and developed over an indefinite period of many years. Our primary concern is the rate of discovery and the producibility, or maximum efficient daily production, that might be





available during the next five or six years. Estimates of producibility for this period have been developed, as shown in Appendix B. resulting in the following figures:

- (a) At the beginning of the year 1958, total Canadian crude oil producibility amounted to 935,000 b/d.
- (b) By the beginning of the year 1960, total crude oil producibility might amount to about 1,050,000 b/d.
- (c) By the end of the year 1963, total crude oil producibility will range between 1,350,000 and 1,550,000 b/d.

These figures in all cases include light, medium and heavy crude oil and it should be noted that up to 10 percent of these gross volumes could be in the medium, heavy, or "sour" classification which have more limited market possibilities than sweet light crude oil.

Imperial's submission to the Gordon Commission (prepared three years ago) predicted an industry producibility in excess of 1.3 million barrels a day for 1960, whereas the present forecast for 1960 is just over 1 million barrels a day. While this difference may seem large, experience has shown that in this type of forecasting such variations can occur when looking ahead five years as in the case of our earlier estimate for 1960: however, the range and







likely variation naturally narrows as the forecast date approaches. In Appendix B, the basis for the current estimate is given. It will be noted that many of the factors which are critical to the estimate are based on judgment and knowledge as of a given date. Generally speaking, independent estimates of the ability to produce crude oil from "existing" wells are usually in reasonably close agreement. The variation occurs in the estimate of future production from reserves that are yet to be discovered. In the shorter term, finding rate is dependent on past, rather than future exploration activity. Accordingly, the conclusion developed in Appendix B is that:

- (a) Between now and 1960, changes in the rate of exploration activity and the timing of large discoveries should not substantially affect this producibility forecast, that is the producibility forecast for 1960.
- (b) By the end of 1963, a producibility range of between 1.35 million barrels per day and 1.55 million barrels per day is indicated, after considering a variation in exploration activity ranging from 20 percent above to 20 percent below present level. These estimates could be affected by the incidence of large discoveries, although there is a considerable time lag between





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discovery and the full production impact  
of such large discoveries.





## PRODUCING ECONOMICS AND PROFITABILITY

(with further detail in Appendix C): Net cash recovery or input of the overall producing industry at a given time is not a true reflection of profitability. The industry is a composite of many individuals and companies with widely different resources, positions and prospects. Gross rate of industry expenditure and cash input is determined mainly by future prospects and long range programs. Consequently, profitability and future cost/price relationships must be examined on the basis of unit values (dollars per barrel) which is the investors' criterion of exploration incentive.

We have estimated such figures, as shown in Appendix C, on the basis of industry averages and specific case studies which bring out the following points:

(a) Current estimates of crude oil replacement costs and profitability in western Canada show that on average the producing industry is earning a return of 7-12 percent. This rate must be considered a modest return on risk capital and no more than sufficient to attract new money at normal success ratios.

(b) Future cost/price relationships which will determine incentive and consequently the basis for future exploration, are chiefly governed by:







- (i) Finding or acquisition costs which vary widely between producers;
- (ii) Realization for crude oil at the wellhead which is affected by length of transportation to markets and competition at the point of sale.
- (c) Acquisition or finding costs may be expected to increase in Canada as the area matures. At the same time, Canadian crude is already at a 30/45¢/barrel disadvantage in wellhead price versus U.S. and Venezuelan crudes due to the long overland distances to markets.
- (d) The further narrowing of cost/price relationships is a matter of serious concern in relation to the supply of equity capital (including retained earnings) which is the only source of risk capital for exploration.

SUMMARY: The major consideration in the development of Canadian crude oil resources is exploration incentive, which involves judgment as to prospectiveness and future cost/price relationships. The following should be recognized in assessing the Canadian industry situation:

I. Exploration, to be effective on a large scale, must be reasonably continuous; it cannot be turned off or on, as in the case of many other minerals, because:

- (a) Specific exploration ventures, even





in limited areas, usually require several years of work.

(b) Very often, success, when it is achieved, comes from restudy and reinterpretation of work done in past years.

(c) Despite great advances in geological and geophysical techniques, no positive oilfinding tool exists today. The only conclusive test is the drill. Only 20 percent of the exploratory wells drilled in western Canada have discovered commercial oil and gas reserves.

II. For the reasons given above, oil producibility in the immediate future is a reflection of past, not current, exploration activity.

III. Exploration in the long term future, on a sound, continuous basis, is dependent on profit incentive, the competitive system, the exploring force and favorable geology, all of which must be present. In western Canada today, only "incentive" need be discussed.

IV. Profit or incentive is primarily a price/cost relationship. In the producing industry, just as in any other business, this relationship is influenced by ups and downs in general price levels. In the western Canadian producing industry, there are three factors which merit special comment on this price/cost relationship:

(a) Within the industry, profit incentive is not a conventional relationship of volume multiplied





by unit of realization. The volumes are determined by proration; consequently, incremental increases or decreases in the total crude outlet do not accrue to one company in the same way as they do to another.

(b) The western Canadian producer is realizing a price at the wellhead which is 30 to 45 cents per barrel less than other Western Hemisphere crudes. This fact alone should be a real indication that any substantial sacrifice in realization would take away, or partially take away, the exploration incentive. It is even more pertinent when it is looked at along with the average industry profit margin estimates which currently appear to be little more than adequate to encourage continued exploration.

(c) The cost of finding is probably increasing, although the rate of increase cannot be reasonably estimated from the limited information and the inherent annual variations. Thus long term future exploration incentives might be somewhat limited if judged on current realizations.

Thus Imperial's analysis indicates that the Canadian oil industry must carefully guard against any action that would permanently further depress crude oil realization relative to that in other areas.

Of major importance in the profitability of the producing industry, and which cannot be covered in detail in this submission, are the present regulations in respect to depletion allowance. This









matter has been the subject of many representations to the federal government authorities by the Canadian Petroleum Association and individual companies over the past ten years, and complete studies have been made available to the Department of Finance. In essence, the present depletion allowance regulations as interpreted by the government allow depletion after the deduction of total exploration costs, and this is a substantial penalty to the Canadian producer, as compared to producers of competitive crudes. In short, the U.S. depletion allowance, which is more favorable than that in Canada, is available to U.S. companies generally no matter where they are operating. Thus to the wellhead price disadvantage, which the Canadian producer presently suffers, must be added the net effect of additional taxes.

MR. WHITE: Mr. Chairman, I would like to ask some advice either of yourself or of counsel. We have some appendices to this Report. Three of them bear on this chapter and one, at least, is most important, and the other two are quite important. We would like, at some stage, to read them into the record.

THE CHAIRMAN: Mr. Pattillo and I discussed that, Mr. White, and our view was that they should be read into the record and not just taken as read.

MR. WHITE: It is a question of timing. We could proceed with them now, because they are related to this section.





THE CHAIRMAN: I think that would be the appropriate time to do it. Do you not think so, Mr. Pattillo?

If you would do that, we would appreciate it, Mr. White.

MR. WHITE: Mr. Mackenzie will start.

THE CHAIRMAN: You are going to read Appendix "A", Mr. Mackenzie?

MR. MACKENZIE: Yes, sir.

APPENDIX "A". CRUDE OIL RESERVES: Estimates of crude oil and natural gas reserves are usually presented under three classifications --proved, probable, and possible. These, in turn, may be expressed as either ultimate or remaining reserves. Used in this sense, probable reserves include proved, and ultimate reserves are equivalent to remaining reserves plus accumulated production.

Proved and Probable Remaining Crude Oil Reserves: Imperial Oil Limited has prepared estimates of proved and probable remaining reserves of crude oil in western Canada using rules similar to those used by the Canadian Petroleum Association. The comparison is shown in Table 1.

Table 1				
Reserves Estimates for December 31, 1957				
(Billions of Barrels)				
	I.O.L.	C.P.A.	Difference	
Proved Remaining - - -	2.75	2.86	4.0%	
Probable Remaining - -	3.77	3.68	2.4%	

The differences are considered to be minor and well within the range that would be expected from





independent estimates.

Possible Crude Oil Reserves: One of the more commonly used yardsticks for expressing the quality of a sedimentary basin has been the number of barrels of oil per cubic mile of sediments. Lewis G. Weeks of Standard Oil Company (New Jersey) has published several papers on this subject and is recognized as an outstanding authority on petroleum geology. Mr. Weeks has applied his volumetric approach to many of the world's sedimentary basins and his estimates of possible crude oil reserves worldwide average 30,000 barrels per cubic mile. His estimates for the continental United States are 50,000 barrels per cubic mile of sediments. To our knowledge, no similar study has been made for Canadian sedimentary basins. However, the application of Weeks' volumetric estimates to the sedimentary basins of western Canada gives the following figures:

Sedimentary Area	Volume of Sediments (cubic miles)
Northwest Territories and Yukon - - -	215,000
Alberta and N.E. British Columbia - -	506,000
Saskatchewan and Manitoba - - - - -	<u>169,000</u>
Total - - - - -	<u>890,000</u>
Possible Reserves at 30,000 bbl/cu. mile = 26.7 billion barrels;	
at 50,000 bbl/cu. mile = 44.5 billion barrels	

All authorities stress the caution with which such figures should be used. They are not, as Weeks has pointed out, proven or probable reserves, nor should they be used as such. In fact, while the









volumetric approach is believed to give figures of the right order of magnitude, they might be highly inaccurate when applied to individual basins. Several of the basin areas of the United States have a comparable geologic setting to the sedimentary area of western Canada so that use of the U.S. yardstick is considered reasonable.

In any event, while the order of magnitude of the numbers may be reasonable, it is important to note that the realization of these numbers is in the almost unlimited future. The key lies in the rate of finding and the key to the rate of finding lies in the incentive to explore.

Summary of Crude Oil Reserve Estimates  
(Western Canada)  
(Billions of Barrels)

Proved Remaining	- - - - -	2.75
Probable Additional	- - - - -	<u>1.02</u>
Probable Remaining	- - - - -	<u>3.77</u>
Possible	- - - - -	27-45

Natural Gas Reserves: The natural gas reserves of Imperial Oil Limited amount to slightly more than 1 trillion cubic feet, most of which is in the form of gas cap gas and dissolved gas and most of this volume is therefore committed to conservation projects and programs. Therefore, due to limited participation in natural gas, Imperial's reservoir engineers have not studied the industry reserves in any detail. Consequently, no reserve estimates on natural gas are submitted.





## APPENDIX "B". CRUDE OIL PRODUCIBILITY.

An important indicator of the growth of the crude oil producing industry in western Canada is that characteristic known variously as producibility, potential, productivity, maximum efficient rate (MER), and maximum permissible rate (MPR). While it would be untrue to say all these terms are synonymous, they imply generally the same thing and their respective values are similar. For the purpose of this submission the word "producibility" will be used and it may be defined simply as the maximum sustained rate at which western Canada can produce without seriously reducing the ultimate recovery.

Present Producibility: The present producibility is obtained by adding the MPR's of all pools in western Canada subject to the following modifications:

1. Certain pools in advanced stages of depletion do not have published MPR's. Their producibility, measured by actual production performance, must be added to the total.
2. In most pools for which MPR's are established there are some wells physically incapable of producing their MPR's. This inability must be subtracted from the total.
3. Many wells, while capable of producing at their MPR's, can only do so by withdrawing excessive quantities of gas or water. Failure to return these fluids to the formation results in penalties which also must be subtracted from the total. The need for estimating





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in (2) and (3) above results in slight variations in the producibility figures quoted by different people.

Imperial's engineers have estimated western Canada's producibility at December 31, 1957, to be 935,000 barrels per day. Of this amount about 2 percent is heavy crude and about 7 percent is medium gravity, sour (high sulphur content) crude. This leaves 91 percent of 855,000 barrels per day in the light crude classification.







Future Producibility: Producibility in the future will depend a great deal on the rate at which new oil reserves are found, in essence the pace of exploration.

The following matters are pertinent to assessment of this pace.

Different companies have different approaches to the end of acquiring petroleum reserves. Some tend to concentrate their efforts on what might be termed "primary" exploration, entering new areas where little is known of the petroleum prospects, and trying to find a key to possible accumulations in those areas. Others prefer to start their operations after this first phase is done, participating in the land play and relatively intensive exploration that follows the initial discovery. Still others are engaged in the acquisition of more or less proved reserves in producing fields through the purchase of leases. Of course, many companies take part in two or all three of these phases, perhaps emphasizing one in relation to the others. All three phases are important in our competitive system.

But the primary explorer has made possible the existence of the other two and primary exploration must be carried on as a long-term and continuing operation if it is to have a reasonable chance of economic success. From the first regional analyses, through the process of acquiring sufficient acreage





to justify the large expenditures to follow, and on through all the normal sequence of exploration to final testing with the drill, continuity is of greatest importance. Since the chance of final success in any one area is relatively small, the primary explorer must diversify his efforts and continue to work from one area to another, making his successes carry his failures. A large staff of highly-trained technical people provides the lifeblood of such an operation.

Exploratory Drilling: The portion of total exploration effort that is represented by exploratory drilling, while only amounting to 25 to 30 percent of total exploration expenditures, has remained fairly constant in recent years and is considered to be the most reliable indicator of the pace of exploration. For this reason it can be used, as such, in forecasting new reserves and producibility.

Figure 1 shows some estimates of exploratory wells to be drilled over the next six years. In 1957, 967 exploratory wells were drilled in western Canada compared with an average of 886 wells a year over the last five years. For the purpose of the forecast presented here, three future levels of drilling activity have been considered as follows: (as shown on chart, page 50, of original brief)

Level A -- Exploratory drilling increases steadily over the next three years to level out at a





point 20 percent higher than the 967 wells of 1957.

Level B -- Exploratory drilling continues at the 1957 level of 967 wells per year.

Level C -- Exploratory drilling decreases steadily over the next three years to level out a point 20 percent below the 967 wells of 1957.

Finding Rate: Up to the end of 1957, a total of 7,786 exploratory wells had been drilled in western Canada. The probable ultimate reserves of crude oil found by this drilling amounted to 4,688 million barrels. This gives a cumulative average finding rate of 603,000 barrels per exploratory well. (Some analysts base their statistical finding studies on other indices such as "barrels found per wildcat well". Certain definitions of well classifications have become widely recognized in the industry and the most common set of definitions is credited to Lahee and is the standard for the American Petroleum Institute. These definitions include the following classes of exploratory wells: Outpost, Shallower Pool Test, Deeper Pool Test, New Pool Wildcat, New Field Wildcat. The finding rate figures used in this presentation are in terms of barrels per "exploratory well" which includes wells of all the above classifications.) Such an average rate is only valid when applied to a very large number of wells. The number should not be considered to indicate the likely result of drilling any one well or even a small group of wells.







The fact is that about 80 percent of the exploratory wells in western Canada have found no commercial oil or gas. The average is maintained by the few wells that find very large reserves.

Oil finding in Canada has been sporadic and wide variations in results have occurred from year to year. Thus a year-by-year plot of historical finding rates gives no reliable trend on which to base a forecast. Experience in the United States, where the number of annual exploratory completions has been 12 to 15 times the number in Canada, is on a broader base and covers a much longer period. A study of the statistics for the United States reveals a steady downward trend in the finding rate as drilling density increases and the present level is between 200,000 and 250,000 barrels per exploratory well. (Hill, Kenneth E., Hammar, Harold D., and Winger, John G., "Future Growth of the World Petroleum Industry", April 1957.) The Canadian industry is at a much earlier stage of development and this is reflected in the higher finding rates experienced to date. But it seems reasonable to expect that a decline will occur in Canada, just as it has in the United States, as drilling density increases.

For this study, it has been assumed that the finding rate in western Canada will decline slowly from a current level of about 600,000 barrels to 540,000 barrels per exploratory well six years





from now.

New Reserves: Three forecasts of new reserves to be found over the next six years have been made by multiplying the number of exploratory wells to be drilled in each year, as represented by levels A, B, and C respectively on Figure 1, given on page 50 of original brief, by the predicted finding rates just discussed. The following table shows the volumes of new reserves predicted for each of the next six years as a result of the three levels of exploratory drilling which have been considered.

TABLE II

New Reserves			
Exploratory Program		Exploratory Program	Exploratory Program
A		B	C
(Millions of Barrels Found)			
1958	- - - 608	570	532
1959	- - - 635	561	486
1960	- - - 661	551	441
1961	- - - 650	542	433
1962	- - - 638	532	426
1963	- - - 626	522	418

Development of New Reserves: There is a considerable time lag between the finding of a new field and the development of that field to full producibility. This delay must be taken into account in a forecast of producibility. Generally it may be said that the industry tends to show more variations in development pace than in exploration. (Development pace after discovery will be influenced by the following factors as shown:





<u>Factor</u>	<u>Relatively Rapid</u>	<u>Relatively Slow</u>
Geographic location	If roads, communications and pipe lines are already developed	If roads, camps, pipe lines, etc., have to be built on remote and difficult terrain
Geology	If the pool outline can be easily interpreted or delineated	If complex geology makes it difficult to define the productive limits of the pool
Producibility characteristics	If favourable	If unfavourable
Mineral leases and lessors	If there are many operators and many mineral owners	If there are few operators and few mineral owners
Drilling conditions	If the productive formations are shallow and easily reached with the drill	If the productive formations are deep and/or the overlying rocks are difficult to penetrate)

From study of the histories of pool developments and from a consideration of current conditions, an average development period of four years has been assumed for future discoveries in this submission.

Forecasts of Producibility: Figure 2, given on page 52 of original brief, presents forecasts of producibility for the three levels of exploratory drilling which were presented on Figure 1.

The lower line on the graph indicates the estimated producibility of fields now known, assuming no new discoveries are made in the meantime.







The three upper lines on the graph show the forecast total producibility when allowance is made for new discoveries. The top line corresponds with exploratory drilling level A and the two succeeding lines with levels B and C respectively.

By way of review, the estimating sequence used in predicting the producibility of new discovery pools was as indicated in the following flow diagram.

Forward estimate of exploratory effort



expressed as  
Exploratory wells to be drilled (Figure 1)



multiplied by  
Barrels of oil found per exploratory  
well drilled (600,000 - 540,000 B/W)



to give  
Reserves to be found in the future (Table II)



apply  
Development pace factors (4 year basis)



to give  
Producibility of future discoveries (Figure 2)

It is obvious that the forecast of exploratory effort is a vital factor in arriving at the end result of producibility estimates. It may be useful therefore to refer again to the exploratory drilling forecast given in Figure 1 and to explain some of the





philosophy behind these particular efforts. There are certain underlying factors which affect the short-term forecast, and others that have a bearing on the activity in the long term.

(a) Short Term: The industry has a built-in momentum which is the dominating factor in the pace of exploration of any immediate future period (say, two or three years). In its simplest terms, an exploration play involves acquiring land, conducting geological and geophysical investigations, and, finally, drilling one or more exploratory wells. In the ordinary course of events, such a program cannot be carried out in less than two years, and may take much longer. Over this whole period, a company must have and maintain an exploration staff of trained geologists, geophysicists, and land men. Thus, when a program is underway, the continuing expenditures required to maintain experienced staff, together with other pre-drilling investments in land and surveys, cannot be abandoned except under very unusual circumstances. Minor fluctuations in the economy will change the tempo only slightly over the short term.

(b) Long Term: Long-term forecasts of exploratory effort differ from short-term projections in that they go beyond a mere continuation of current exploration projects and consider the commencement of entirely new exploratory plays. Thus the intensity of exploratory effort over the long term depends entirely





on incentive in the form of profitable markets and on a favorable political climate to attract risk capital. If these conditions are favorable, exploration will continue at the rate necessary to find the new reserves to meet market requirements.

Conclusions re Producibility: The following conclusions apply to the estimates represented on Figure 2.

1. Industry producibility of about 1.05 million barrels a day can be expected at the commencement of the year 1960.

2. Producibility in the order of 1.35 to 1.55 million barrels a day is possible by about the end of 1963.

3. The producibility range of 1.35 million barrels a day to 1.55 million barrels a day may seem narrow considering the fact that the limiting assumptions are exploration efforts 20 percent above and 20 percent below present base. Naturally, the range would widen if projected further into the future. However, this does illustrate that there is a considerable time lag between the commencement of exploration and the full production impact that stems from the exploratory venture.

The estimates assume that industry will strike averages each year both in exploration results and in development pace. In reality, this does not often happen.







Figure 3, page 55 of original brief, portrays the annual exploration results since 1946 in terms of present estimates of the probable reserves found in each year. It may not be quite true to say that oil finding has been cyclical, but there are certainly indications of periodicity with series of prolific discoveries being followed by several years of disappointing results. Thus, both the size and the timing of new discoveries can alter forecasts of this type.

---A short recess.

THE CHAIRMAN: Gentlemen, we shall now resume the hearing. Mr. Mackenzie?

MR. MACKENZIE: APPENDIX "C". PRODUCING ECONOMICS. Most companies engaged in the production operation accumulate each year's business by segments of cost as follows:

(a) Operating Costs: All wages, materials, supplies, services and taxes (excluding income tax) that pertain to production expense plus overhead. Shown as an annual total.

(b) Depreciation of Development Capital as calculated in the following manner:

i. Surface -- capital cost of surface installations that are part of the production operation (such as tanks, separators, etc.) -- depreciated over the approximate life of the asset -- expressed in \$/year.





ii. Subsurface -- capital cost of drilling and completing each successful well divided by the net barrels of reserves under the spacing unit assigned to the well. Thus, as each barrel is produced, the same depreciation is taken and the capital is amortized over the life of the reserve -- it is expressed in \$/year by multiplying by the net barrels produced in the year. (Some companies use "time depreciation" on subsurface capital investment.)

(c) Exploration Costs: Consists of bonus payments for mineral leases, mineral lease rentals, exploration research, geological operations, geophysical operations, exploration drilling and supervision. Shown as an annual total.

The above represents the normal method of booking costs for accounting purposes. Clearly each cost segment is related to the revenue of a fiscal year as in a profit and loss statement.

However, to assess the profitability of the producing operation it is necessary to relate investment to the barrels of reserves found and developed and thus reflect the size of the reserves available for future production. Thus, to measure profitability, the three cost segments should be related as follows:





Operating Cost =  $\frac{\text{Dollars Spent}}{\text{Annual Net Production (Net Barrels)}}$

Development Capital Cost =  $\frac{\text{Dollars Spent}}{\text{Drilled Reserves (Net Barrels)}}$

Acquisition Cost =  $\frac{\text{Dollars Spent}}{\text{Probable Ultimate Reserves Found (Net Barrels)}}$

The total of these is commonly referred to as "replacement cost".

While the expression of this cost is simple, as it merely represents the annual or cumulative expenditures of the producing industry, it is in fact difficult to obtain precise figures of the industry dollar expenditures broken down into the three segments required and it is even more difficult to get precise figures on reserves.

To overcome these difficulties, Imperial Oil Limited has for some years now assembled "unit of work" statistics of the producing industry, and has applied to these statistics the best possible estimate of accompanying dollar costs. It is believed, therefore, that the estimates of industry costs used hereafter are a fairly accurate portrayal of producing cost history in western Canada.







Since operating costs are related to annual production and development capital costs are related to drilled reserves, these ratios can be estimated with reasonable accuracy. Acquisition costs, however, being related to ultimate probable reserves found, present a more complex problem, since an insufficient backlot of production history is available to accurately pinpoint ultimate reserves in any of the active areas of western Canada.

(Relatively speaking, the modern Canadian oil business is very young. Today, there are areas in western Canada that have been actively explored for the last seven or eight years -- they are being actively explored now and there is a very good chance that they will be under active exploration for at least a decade in the future. The exploration being done today will be applicable to reserves discovered in the future and the question arises as to whether such costs should be applied against today's probable reserves estimates in determining current acquisition costs or whether they should be more properly applicable against reserves that will be found in the future. The only reasonable solution appears to be to take the view that exploration will be conducted in favourable areas for years ahead and that additions to present reserves estimates will be made for years in the future and that, therefore, the only





practical solution is to apply current costs to current reserves estimates.)

Since very little historical background exists upon which trends can be established, the unit costs which will follow in this section may be said to reflect current estimates which may be subject to future revisions.

Finally, the problems of separation or integration of natural gas reserves and exploration costs have not been attempted since Imperial's natural gas data are quite limited.

(It is recognized that the large reserves of natural gas are a credit to the industry exploratory effort. However, in view of the extremely long delay in obtaining markets for much of the gas, there is considerable uncertainty in how to value the reserves. The value of the natural gas reserves was therefore not included in determining acquisition costs although it is recognized that it does have value and would in fact reduce acquisition costs by a small amount. Natural gas liquids reserves have been included in probable ultimate reserves used in calculating acquisition costs.)

The foregoing general comments were for the purpose of emphasizing the difficulties involved in estimating industry economics. Despite those difficulties five short studies were prepared and





are presented in this Appendix.

The five cases are:

1. Replacement costs for crude oil based on industry statistics - Case A.
2. A specific unsuccessful exploration venture of Imperial Oil Limited - Case B.
3. A successful exploration venture of Imperial Oil Limited - Case C.
4. A hypothetical experience of a successful producing company - Case D.
5. A hypothetical experience of another producing company (marginally successful) - Case E.

CASE A - Replacement Costs (Based on Industry Statistics):

If the industry is to sustain itself it must acquire and develop for production, a barrel of reserves for every barrel of oil actually produced. It may be said, then, that the total expenditures of the petroleum industry, related to barrels acquired, developed, and produced, are a measure of the industry's crude oil replacement costs. It follows that the relationship between crude oil replacement costs and realization provides a measure of the economic wellbeing of the industry.

The succeeding figures are based on estimates of actual industry operations over the







period 1947 to 1957, the costs having been accumulated (the procedure of using accumulated past costs may not seem compatible with the objective of calculating a replacement cost, which implies the use of current and future costs. However, the wide annual variations in finding coupled with the short history in western Canada renders impossible the establishment of a trend in acquisition costs. The only practical solution appears to be the use of accumulated costs and accumulated reserves to reflect the costs per barrel to date, leaving to subjective judgment the extent to which future costs may vary) and averaged on Imperial estimates of industry annual dollar expenditures for each of the acquisition, development, and operating categories. The costs are expressed on a per barrel basis and added to determine the replacement cost per barrel. In each case the actual dollar expenditures have been adjusted by applying the General Wholesale price index to reflect more accurately the true replacement cost in terms of 1957 dollars.

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TABLE I

ACQUISITION COST

Year	Accumulated Total Acquisition Cost Thousands of \$	Accumulated Ultimate Pro- bable Reserves Thousands of Net Bbls.	Accumulated Acquisition Cost \$ per Net Bbl.
Prior to & incl. 1947	79,212	560,041	.14
1948	117,008	1,331,517	.09
1949	197,864	1,576,761	.12
1950	320,020	1,835,702	.17
1951	460,158	2,118,066	.22
1952	661,841	2,714,474	.24
1953	849,776	3,698,194	.23
1954	1,106,027	3,848,809	.29
1955	1,351,758	4,127,716	.33
1956	1,635,803	4,240,110	.39
1957	1,942,384	4,414,430	.44*

\*If the five year period of 1953 through 1957 were taken  
the acquisition cost would be \$1,280,543 = \$0.75 per bbl.

1,699,956

However, 1957 reserves are probably understated,  
making this five year average acquisition cost some-  
what high.

DEVELOPMENT CAPITAL COST

It is assumed that the amount of developed re-  
serve as of December 31, 1957, was 96 per cent of the  
proven reserve of 3.30 billion net barrels or 3.03  
billion net barrels. Cumulative development costs  
amounted to \$1,039,995,000.

The development capital cost ratio is therefore --

\$1,039,995,000 - \$0.34/net barrel

3,030,000,000





### OPERATING COSTS

In Table II an estimate has been made for industry operating costs. The figures have been built up independently by Imperial Oil Limited, based on judgment and experience and are believed to be representative of actual industry operating cost history in western Canada.

TABLE II

### OPERATING COSTS

Year	Accumulated Cost Thousands of \$	Accumulated Production Thousands of Net Bbls.	Cost \$ per Net Bbl
Prior to & incl. 1947	23,310	80,825	.29
1948	32,360	90,863	.36
1949	42,690	108,692	.39
1950	57,870	133,097	.44
1951	78,470	173,863	.45
1952	104,500	226,355	.48
1953	130,170	295,654	.44
1954	165,060	377,851	.44
1955	217,460	488,708	.44
1956	289,696	636,001	.45
1957	365,348	792,071	.46

From the preceding data the following replacement cost calculation can be made:

	Actual Dollars	Adjusted Dollars
Cost of acquisition	0.44	0.46
Cost of development capital	0.34	0.36
Cost of operating	<u>0.46</u>	<u>0.48</u>
Replacement cost per net barrel	1.24	1.30







## REALIZATION

In Table III the weighted average wellhead crude price for western Canada for the years 1948 to 1957 are given.

TABLE III

	\$ per Bbl.
1948	3.15
1949	2.90
1950	2.95
1951	2.45
1952	2.33
1953	2.48
1954	2.54
1955	2.36
1956	2.37
1957	2.52 (estimated)

For comparison purposes the 1957 average is compared to some other well known crude sources in the Western Hemisphere as follows:

Western Canada Average (wellhead)	\$2.52
Redwater	2.63
Pembina	2.61
U.S. Mid-Continent 35°	3.05
Guanipa 30° (f.o.b, Puerto la Cruz, Venezuela)	2.78

### Comparison Between Realization and Replacement Cost

The replacement cost amounts to roughly 50 per cent of the realization. The difference between realization and replacement provides the amount available for payment of income tax, cost of money and profit.

The cost of money is a most important





factor. In the producing industry, the investment is made in total before a dollar of income is received, and the prime asset (i.e. oil and/or gas reserve) is produced very slowly over a period of years. Hence, the income from the investment will not be realized, in total, for a period of 10-40 years (i.e. until the reserves are depleted).

Thus, the realization and replacement cost compare as shown in Table IV.

TABLE IV

	Future Worth	Present Worth*		
		at 6% & 20 yrs. Dollars per Bbl.	at 6% & 25 yrs.	at 6% & 30 yrs.
Realization	2.52	1.64	1.50	1.29
Replacement	1.30	1.12	1.10	1.06
Margin before tax	1.22	.52	.40	.23
Income Tax**	.41	.22	.19	.15
Margin after Tax	.81	.30	.21	.08

\* The use of 6% is perhaps a low figure -- it is only slightly more than the present day prime borrowers' rate of  $5\frac{1}{2}\%$ .

\*\* Since such items as most exploration expense, operating expense, and a portion of development capital may be written off for tax purposes in the year in which they are incurred, or (with the exception of operating expense) carried forward indefinitely, the payment of income tax will be delayed for some years, and the present worth calculations take this into consideration.

Carrying the conclusion one step further, these margins can be calculated as a rate of return (using the investor's method), and they are within the





range of 7 to 12 per cent after tax. Imperial feels that rates of return of this order are the minimum necessary to attract the risk capital required in the exploration effort that lies in the future.

## CASES B AND C

### Case Histories

When considering the oil producing industry's growth potential, average industry economics do not tell the full story. Contained within those industry averages are figures representing a wide variety of failures and successes. To illustrate this point, two examples have been worked out on the basis of actual case histories taken from the records of Imperial Oil Limited.

The cases were not selected merely because of the indicated results. Rather, the projects on which these two studies were based were of a nature that permitted a reasonably clear-cut allocation of costs and results. Case B represents a completely unsuccessful exploratory venture. Case C presents a picture of a moderately successful venture in which an exploratory program uncovered commercial oil in sufficient volume to pay back the costs of both exploration and development and still leave a small margin of profit.







## CASE B

### A Specific Unsuccessful Exploration Experience of Imperial Oil Limited

This is the history of a project in which a block of Crown acreage was taken under reservation by Imperial. The Company planned a systematic exploratory program aimed at finding commercial oil or gas. Had this exploratory endeavour yielded the desired results, up to 50 per cent of the acreage could have been converted to lease in the Company's name, with development drilling and ultimate marketing of the produced substances following in due time. The remaining acreage would have reverted to the Crown for possible disposal by sale to various operators at a later date.

In point of fact, however, commercial quantities of oil or gas were not found during the primary exploration program. While there were a few encouraging signs of oil and gas accumulations, much more detailed work, probably taking a number of years, would have been required to prove or disprove the possibility of commercial production. Imperial did not feel it could continue further with the program, considering that lease rentals alone would amount to about 2 million dollars a year. Imperial's rights in most of this land block have now been surrendered.





The maximum amount of reservation acreage held under this project was about 3,975,000 acres. The expenditures were about as follows:

Table 1

	Total \$
Land Costs	1,463,000
Geological and Geophysical Surveys	3,404,000
Exploratory Drilling	1,671,000
	<hr/>
Total	\$6,538,000

The above expenditures took place over a period of eight years. Considering a nominal cost of money of 6 percent per annum and applying it to the progressive and accumulated expenditures to the end of the project, the total cost becomes about \$8.4 million.

The above example illustrates the scale of expenditures that a primary explorer may have to make, often without any financial return. To stay in business, a company engaged in primary exploration must have large capital resources to start with and/or a substantial current income to support his exploratory efforts until those efforts can generate their own returns. Moreover, he can only justify the big expenditures that are required if there is a reasonable assurance of profit. To meet this condition, he must be ready and willing to continue his endeavors so that his successes can carry his failures and return a profit on the combined outlays.





CASE C. A Successful Exploration Venture of Imperial Oil Limited: Another area in which the costs and apparent results could be segregated readily was selected as the basis for Case C. Since this is a currently active area, the release of actual figures could conceivably prejudice the positions of other operators working there. For this reason, the sizes of the expenditures have been altered through multiplication by a common factor for purposes of disguise. Care has been taken to see that the economic results, which are stated in relative terms, were not altered. They portray the results of the actual operation to the best of Imperial's ability to judge these results at this stage.

Case C presents the results of an operation in which an exploratory program was carried on at a steadily increasing rate for a period of over five years before the first commercial oil production was found. Active exploration and development continued until Imperial's acreage holdings were satisfactorily evaluated. Total expenditures up to the time of the first substantial production added up to about \$1.3 millions. Total expenditures of a capital nature (exploration and development costs), were about \$11.2 millions over the life of the program. This amounts to about 86 cents per net barrel of reserves acquired. Of this figure, about 47 cents per net barrel was in the form of acquisition expenditures







and 39 cents per net barrel represented development capital costs. Operating expenses are relatively high, averaging 67 cents per net barrel. Imperial's net reserves are 13 million barrels.

On the basis of the above, total replacement costs are \$1.53 per net barrel and this gives the following indicated results which are shown in Table II.

Table II

	Future Worth (\$/Bbl.)	Present Worth at 6% (\$/Bbl.)
Realization	2.56	1.62
Replacement Cost	1.53	1.22
	<hr/>	<hr/>
Margin before tax	1.03	0.40
Income Tax	0.40	0.21
	<hr/>	<hr/>
Margin after tax	0.63	0.19

The rate of return (the rate of return was calculated using the discounted cash flow or so called "Investor's Method") on this operation over an estimated 30-year producing life is expected to be about 11 percent after tax. By any standard, this is a very moderate return on risk money in a successful venture. The primary explorer must have before him the hope of much larger returns on his successful ventures to carry the losses of his unsuccessful exploratory projects such as was outlined in Case B.





CASES D and E. Hypothetical Examples: It has been stated that an exploring company must normally carry on a continuing program to achieve a measure of success in the hit-and-miss business of oil finding. Not only must the search be continuous; it needs also to be carried on with a high degree of skill and efficiency and preferably with a touch of good fortune if the company is to flourish. The success of an exploratory program is measured by the cost of acquiring reserves.

The range of acquisition costs is very wide. To illustrate how heavily these costs can bear on a company's future, the progress of two hypothetical exploring companies was charted over a period of twenty years from their respective entries into the play. The two hypothetical companies, call them Company D and Company E, are represented by Cases D and E respectively. Company D had a continuing acquisition cost of 25 cents a gross barrel while Company E has an acquisition cost of 75 cents a gross barrel.

In order to validate the comparison, other conditions were made as comparable as possible between the two companies. Important conditions common to both companies were as follows:

1. Wellhead price -- \$2.50 per barrel.
2. Royalty --  $12\frac{1}{2}\%$  of gross production.
3. Production --  $6\frac{1}{2}\%$  annually of remaining reserves.
4. Operating costs -- 50¢ per gross barrel.





5. Average reserves per well -- 300,000 barrels.
6. Development capital investment was assumed to be \$85,000 per well.

In the calculation each company was assumed to commence operations with \$5 millions of equity capital (each company was assumed to acquire initially two 100,000 acre reservations, carrying out preliminary surveys to the same total costs in the first two years and drilling to discover oil in the third year. The initial exploratory programs were designed to use about half of each company's available capital in the first three years). No additional capital was invested during the period in the form of new equity; and in the first series of calculations, no issuance of funded debt was assumed. However, during the period of development of discoveries made during the early years, each company made use of short term financing to avoid a serious interruption of exploratory work while its income from production was being built up.

As the two hypothetical companies were used solely to demonstrate a principle rather than to reflect actual case histories, no capital realization in the form of dividends was provided for during the twenty-year period. Instead, all income in excess of requirements for operating, development, and other expenditures was assumed to be used in exploring for additional reserves.







The usual experience is for exploration success, particularly in the case of an individual company, to be cyclical in nature even if a fixed annual amount is provided for exploring. However, in the interest of simplicity, it was assumed that after a preliminary two-year period, discoveries each year would be in direct proportion to exploration expenditures.

In short, this projection attempts to reflect the progress of two companies operating under parallel conditions, but with different finding costs. In actual practice, results could vary considerably from those shown depending on financial policy in respect of debt financing and dividend payments, to say nothing of the effect of the timing of discoveries during the period.

Figure 4 (on page 65 of our brief) shows the progress of Company D and Company E respectively in terms of the growth of remaining reserves. Figure 5 (on the next page of our brief) shows the progress of each company in terms of annual production. It will be noted that by the end of the twentieth year, Company D has remaining reserves of 76 million gross barrels, while Company E has remaining reserves of some 9.5 million gross barrels. In other words, with an acquisition cost for Company D equal to one-third that of Company E, reserves of the former company would be about eight times those of the latter





at the end of the twenty years. The slopes of the respective remaining reserve curves in Figure 4 and the production curves in Figure 5 illustrate that Company D is able to finance from its own earnings a rapidly increasing rate of exploration and development, whereas Company E, reinvesting all its earnings, shows only minor growth. In fact, the rate of growth of Company E has been such that it hardly justifies the original investment in what is predominantly a high risk enterprise.

It is apparent from these examples that the future of a company with a relatively low finding cost is practically unlimited. Company D in our example would be in a position to expand at a much more rapid rate than we have shown. The rapid build-up of production and reserves would enable it to make use of borrowed funds and thereby expand its operations (at which time the underlying security would be reserves in the order of 15 million gross barrels) its remaining reserves at the end of the twenty-year period would be some 100 million gross barrels, an improvement of 32 percent over the 76 million gross barrels it would have remaining if exploration were financed solely from its own earnings. This calculation was based on an interest rate of  $5\frac{1}{2}\%$  per year on the outstanding balance of the debt which, it was assumed, would be repaid in equal annual instalments over fifteen years so that the company would be





debt-free at the end of the period.

As an alternative to debt, or perhaps in conjunction with debt, Company D could readily obtain infusions of additional equity capital. The build-up of reserves of this company would under normal conditions enable shares to be sold at a price substantially above that of the original issue used to raise the \$5 millions assumed as the original equity base.

Company E would obviously have difficulty in expanding its operations to obtain results of greater magnitude than those shown in Figures 4 and 5. In fact, our calculations show that if money were to be borrowed, on the same basis as used in the illustration for Company D, Company E's position at the end of the twenty-year period would be no different from the original case using no funded debt. The carrying cost and repayment obligations in respect of the debt would reduce the level of exploratory activity in the later years by an amount sufficient to offset the short term expansion in reserves resulting from the use of the borrowed funds.

The foregoing illustration is designed to show that the level of acquisition costs over the long term is the key variable in the success of an exploration company. There is no doubt that the growth possibilities in a company that can achieve lower than average acquisition costs provide the







incentive that attracts risk capital to the industry.

MR. TWAITS: May I proceed with Section IV.

IV. Development of Crude Oil Markets and the Economics of New Market Penetration: Prior sections of this submission have emphasized the importance of exploration incentive to the producing industry and this, of course, if affected by markets. The growth of the market for Canadian crude oil to its present expanse, extending some 2,600 miles from the Pacific coast to Toronto, is virtually a textbook case of market penetration by a new crude supply source. Since 1947, refinery and transportation facilities have been created to market Canadian oil at a pace perhaps never equalled in the development of a new producing area.

It is pertinent to examine this development, recognizing that no other land-locked producing area in the world has succeeded in extending its marketing area so far. The discovery of Leduc and then Redwater as major oil reserves established the prospectiveness of the western Canadian basin and almost immediately brought up the problem of finding markets beyond the local prairie requirements.

The decision to move oil to Ontario, involving a substantial price reduction to the producer, was the major marketing step which established the present competitive area of Canadian oil. This decision and the creation of the Interprovincial Pipe Line system





was only undertaken after full consideration of long range trends in world production and consumption. The creation of such a large system depended on guaranteed refinery demand and accompanying financial guarantees, plus access to future consuming areas within economic penetration of Alberta crude oil.

Canadian crude oil reached its present orbit in the three stages outlined below. It should be noted that each step involved various long term commitments by individual companies; that the major crude price gamble was, and still is, the penetration of the Ontario market; that equitable sharing of the crude oil market, necessitated by conservation requirements, leaves an unequal burden on certain companies; and finally, that all these steps have followed a pattern of providing access for Canadian crude to markets with long term growth potential.

In telling the story from Imperial's standpoint, we apologize for not adequately dealing with the efforts and activities of others. However, first-hand information from one company's files should be of value, and we feel that the record should be presented in further answer to the question discussed in our introduction as to the Canadian character of Imperial's policies. As the record is traced, it will, we hope, be evident that where Imperial has had confidence in the long-range soundness of a market for Canadian crude it has not hesitated to assume great





financial risks and has repeatedly backed out imports of oil purchased from affiliated companies as the opportunity to use Canadian oil has expanded. These steps have been taken despite the fact that to an increasing degree the Canadian crude oil has come largely from the wells of the many other producers active in western Canada.

History of Western Canadian Crude Market Developments: Prairie Market: The first phase of a major program to expand the markets for Canadian crude oil following the discovery of the Leduc field was the saturation of the prairie provinces market.

From self-sufficiency during the years when Turner Valley was most productive, the prairie area had become increasingly a deficiency region from about 1940. The prairie market during the year 1947, when the Leduc field was discovered, required imports of 20,100 barrels per day of crude oil to augment the local production of 19,500 barrels per day. It also required the import of 2,000 barrels per day of products (that is, refined products) from United States and shipment of 10,800 barrels per day of refined products from eastern Canada. The prairie supply problem at that time was one of major economic significance for consumers as well as the oil industry.







The first step in utilizing the new production of the Leduc and other fields in the Edmonton area, of course, was to displace imported crude oil at the Calgary, Regina and Moose Jaw refineries. The production was in great demand by all the local refineries to back out expensive imports and no sales initiative was required by the producers. It was essential to install quickly adequate field gathering and tank car loading facilities. Imperial Pipe Line Company undertook the initial task with despatch investing \$5.4 millions by 1950, a figure which has since been almost doubled.

The speed with which Alberta production backed out prairie crude oil imports and supplied expanding refinery capacity is illustrated by the following table:

	1947	1948	1949	1950	1957
	(thousands of barrels per day)				
Prairie refinery runs:					
Canadian crude - - -	18.5	31.8	54.6	71.8	151.3
U.S. crude - - - - -	<u>20.1</u>	<u>14.0</u>	<u>2.5</u>	<u>.6</u>	<u>-</u>
Total crude runs - - -	38.6	45.8	57.1	72.4	151.3
Products from U.S. and eastern Canada - -	12.8	11.9	14.6	8.0	4.0

1. The foregoing table also indicates the second phase of saturating the prairie market which was to displace product shipments into the area from the United States and eastern Canada. By 1950 new refining capacity, built for this purpose, raised crude requirements by 33,800 barrels per day. The growth of the local market was so great, however,





that it exceeded local refinery supplies by 8,000 barrels per day of products in 1950. There is now ample refining capacity to meet the current prairie demand of 145,000 barrels per day. The 1957 imports are mostly aviation gasoline and specialty products not available from local refinery production.

This prairie refinery expansion program was a major industry undertaking involving capital expenditures since the discovery of the Leduc field of between \$180 and \$200 millions. Imperial's part in this program involved building new refineries in rapid sequence at Edmonton and Winnipeg, and expanding materially the capacity of the Regina refinery.

The most dramatic step was the movement of the war-built Whitehorse refinery down the Alaskan Highway for re-erection at Edmonton. The initial cost of this plant was \$11.7 millions. It was soon expanded and now has a capacity of 28,500 barrels per day, representing a capital investment of \$34.5 millions.

The Winnipeg refinery made a major contribution toward expanding the market for Alberta crude. It displaced the movement of historic Ontario products into eastern Manitoba. This plant cost initially \$9.9 millions and has been subsequently increased to a total capital investment of \$15.3 millions. Additional capital expenditures of \$12.4 millions have been made at Regina and \$17.4 millions committed at Calgary





since the Leduc discovery.

Imperial also leased the old North Star refinery at Winnipeg and financed the \$300,000 cost of adding to its capacity pending the completion of its Winnipeg refinery. Imperial undertook a firm crude oil commitment to provide the supply assurance required to justify the building of a new refinery at Edmonton by McColl-Frontenac, even though crude reserves were not then proven to support this commitment. All this added refinery capacity resulted in more residual fuel production than the market could accommodate. To cope with this situation, Imperial undertook to bear a substantial part of the railways' cost of converting coal-burning locomotives and a major locomotive conversion project was carried out.

The saturation of the prairies could not have been accomplished without a pipe line eastward. As an initial stage and in a time of acute shortage of pipe rolling capacity, plans had been made to start the line eastward as far as Regina. On the basis of a firm order for the maximum diameter pipe that could be rolled at Welland, Ontario, at that time, a new pipe mill was constructed and 16-inch diameter pipe produced. With the later decision to carry the line to the Great Lakes, this pipe was installed east of Regina as far as the United States border.

Ontario Market: The Interprovincial Pipe Line Company's project to reach the Ontario market







was made feasible by Imperial assuming substantial financial obligations. Imperial had to guarantee by throughput and deficiency agreements both the interest and principal on the original debenture and bond issues totalling \$89 millions. In addition, at the specific request of the financing group, Imperial subscribed to one-third of the common shares and convertible debentures originally issued by Interprovincial. Subsequently it contributed the same proportion of the additional funds raised by equity financing in 1953. In all cases, Imperial paid the same price as the public. Imperial's total direct investment amounts to \$14.6 millions in addition to the underlying guarantees.

Imperial also built three large lake tankers designed exclusively for this trade. Two were financed by bond issues of \$8 millions guaranteed by Imperial and the other by a cash investment of \$4.2 millions.

In order to promote the use of Alberta crude by other refiners in Ontario, Imperial entered a 5-year contract with British American Oil Company to supply 3 million barrels of Leduc crude oil annually for delivery to its Clarkson refinery. The commitment was required to justify the construction by British American of a large lake tanker to carry the oil from Superior, Wisconsin, to Clarkson and required Imperial's guarantee of crude priced low enough to compete with Illinois crude from Toledo. Imperial also made a 10-year





commitment to supply 15,000 barrels per day of Redwater oil to Canadian Oil Companies Limited at a delivered cost competitive with Illinois oil at Sarnia, the main purpose of the contract being to enable Canadian Oil to build a new refinery to use Alberta crude rather than imported crude oil.

In order to curtail the use of imported crude oil purchased from Imperial's affiliates for delivery at Sarnia, it was necessary to construct a large tank farm at Sarnia to accumulate supplies for the closed navigation period. The new tankage and dock facilities at Sarnia cost \$6 millions. Much higher investments for tankage and additional tankers were scheduled when, toward the end of 1952, the rapid growth of crude reserves resulted in a reappraisal of the tanker program. As a result, it was decided to halt the tanker and tankage construction program and, instead, arrange with Interprovincial to extend its line from Superior to Sarnia in order to bridge the water gap on a year round basis.

The growth of the Ontario market and the extent of its supply from Canadian crude are indicated in the following summary:





Crude Oil Runs at Ontario Refineries  
(thousands of barrels per day)

	Imports	Canadian	Total
1950 - - - -	68.7	-	68.7
1951 - - - -	43.7	30.0	73.7
1952 - - - -	37.3	47.6	84.9
1953 - - - -	30.3	73.2	103.5
1954 - - - -	24.1	97.3	121.4
1955 - - - -	26.6	107.0	133.6
1956 - - - -	25.3	131.9	157.2
1957 - - - -	21.7	137.1	158.8

In addition to cutting Ontario crude imports by 47,000 barrels per day since 1950, the runs of Canadian crude have grown by an additional 90,000 barrels per day due to the installation of new refinery capacity. Imperial's investment in additions and improvements at its Sarnia refinery since 1950 totals \$51.8 millions exclusive of tanks and docks for crude oil.

The extension in 1951 of the market for Alberta crude to Ontario had important economic significance for western producers and consumers. Once the throughput guarantees were made and the facilities installed, the prairie production was permanently committed to a price that would meet whatever competitive forces were encountered in the Ontario market regardless of more attractive markets that might develop elsewhere.

This basic fact resulted in a prairie crude price structure much lower than would have applied had the market not been extended beyond the prairie provinces. Thus, the Leduc crude price drop on reaching Ontario was 44 cents per barrel.







United States Markets: The construction of the Interprovincial line to the lakehead and its subsequent extension through Michigan, provided an economic basis for extensive selling efforts and negotiations to promote the use of Canadian crude oil along the pipe line route in the United States.

Imperial entered long term supply contracts with Lake Superior Refining Company and International Refineries, as a result of which their respective refineries at Superior, Wisconsin, and Wrenshall, Minnesota, were constructed. Later, as a result of discovery in Saskatchewan of crude oil of a quality not readily marketable in Canada, a pipe line was built by others in the industry from Clearbrook, Minnesota, on the Interprovincial line to supply a new refinery at St. Paul, Minnesota, designed specifically for the use of this type of Saskatchewan oil. The completion of this line made it possible for any grade of Canadian crude carried in the Interprovincial system to be delivered to St. Paul refineries. The growth of the export market in these areas is shown in the following table:

Exports to Central United States Refineries (thousands of barrels per day)				
	Michigan	Lakehead	St. Paul	Total
1951 - - -	-	.9	-	.9
1952 - - -	-	3.1	-	3.1
1953 - - -	-	6.0	-	6.0
1954 - - -	-	3.0	-	3.0
1955 - - -	-	7.3	7.7	15.0
1956 - - -	4.7	15.4	26.7	46.8
1957 - - -	4.5	14.9	37.2	56.6





Pacific Coast Market: Even before the extension of the Interprovincial line to Sarnia, it was recognized that with Alberta oil priced to be competitive with imports in Ontario, there was a sound basis for believing it to be economically attractive to refineries in the B.C. and Puget Sound area. A number of large oil companies interested in such a proposal jointly studied it over a period of several months in 1950-51. At the concluding meeting, considerable reluctance to proceed with such a risky venture was expressed but Imperial decided it would support a pipe line from Edmonton to Vancouver even if none of the other companies were interested.

Subsequently, several other companies agreed to support the venture and Trans Mountain Oil Pipe Line Company proceeded with the line. Imperial subscribed to  $8 \frac{2}{3}$  percent of the common shares issued, which is still what we have, investing \$1.3 millions at the public price. The bulk of the funds to build the line was raised by First Mortgage Bonds secured by deficiency agreements of the few large companies sponsoring the venture. A total of \$65 millions was raised by a bond issue in 1952 of which 54.178 percent was guaranteed by Imperial. Later, borrowings were increased to \$101 millions, of which Imperial's deficiency agreement covers over \$41 millions.

The forecast demand of the British Columbia market was just about sufficient at the originally





contemplated tariff of 60 cents per barrel to service the debt incurred to finance the pipe line. For this throughput to materialize, however, required a major expansion and modernization of the industry's three Vancouver refineries to back out the substantial imports of petroleum products needed by the growing market. In Imperial's case the projects at Ioco involved capital expenditures of \$21.4 millions since 1951.

It was hoped, however, that as in the case of the Interprovincial line at the lakehead, the construction of the Trans Mountain system would attract new refinery capacity, this time in the Puget Sound area to take over a portion of the substantial market in the Pacific north west, then supplied by products from California. General Petroleum, Shell and United States Refining Company built refineries there and Texas Company has a new plant under construction.

When the General Petroleum refinery was completed, it was learned that it was to operate in large part on Venezuelan crude. In order to secure a continuing outlet for Alberta crude oil, Imperial negotiated agreements with General Petroleum and Socony Mobil under which Imperial purchases, and continues to purchase, 11,500 barrels per day of Venezuelan crude from Socony for shipment to Montreal or Halifax, and General Petroleum Company buys a like







volume of Alberta crude for shipment to Ferndale.

This agreement is still in effect.

The outlet to the west coast in early 1957 exceeded all previous forecasts as a result of the disruption of normal transportation routes caused by the closure of the Suez Canal. The re-opening of the Canal and distress tanker rates have been equally disturbing in the opposite direction and the current market for Alberta crude on the west coast is depressed. The historic development of this market is illustrated in the following table:

Deliveries of Alberta Crude to West Coast Market (thousands of barrels per day)					
	Vancouver	Puget Sound	Tankers	Offshore	Total
1953 - - - -	7.3	-	-	-	7.3
1954 - - - -	36.3	4.1	-	-	40.4
1955 - - - -	52.7	30.9	-	-	83.6
1956 - - - -	55.9	52.5	17.0	-	125.4
1957 - - - -	61.4	74.2	19.6	-	155.2

THE CHAIRMAN: Am I correct in assuming no Saskatchewan crude goes to the West Coast?

MR. TWAITES: That is correct, sir.

### 3. PRINCIPLES OF MARKETING DEVELOPMENT

AND EXPANSION: The expansion of markets for Canadian crude which we have been discussing illustrates the basic principle that on the competitive battlefield of crude markets the advantage of a given source varies directly with the relative length of the lines of supply of competitive sources compared with the length of its own lines of supply to the market. This means that the price in the fringe market less transportation to the market establishes the price





at the wellhead.

Therefore, the incentive for market expansion for western Canadian crude oil, as well as the incentive for exploration and development, depends in substantial measure on the extent to which our transportation network is competitive with those of alternate supply sources. As a simplified method of bringing out the relative advantages and disadvantages of various markets for Canadian crude, it is interesting to review the basic distances involved between supply sources and markets. Individual cases may in practice be modified by the specific transportation facilities available or by short-term variations in items such as tanker rates, but in general the basic conclusions as to the relative attractiveness of various markets will not be affected.

In the interior part of the North American continent the competition which Canadian crude meets is from United States crude oil.





TABLE I

DISTANCE FACTORS

Internal Continental Crude Oil Markets  
for Canadian Crude

Market	Distance in Miles from:		Canadian Crude	
	Edmonton	U.S. Mid-Continent* (Drumright, Okla.)	Advantage	Disadvantage
Edmonton	.....	1,600	1,600	....
Regina	440	1,160	720	....
Lakehead	1,100	745	....	355
Sarnia	1,740	890	....	850
Chicago	1,436	620	....	816
Toledo	1,630	785	....	845

\* United States Mid-Continent taken as representative, since other crudes such as Illinois normally bear a relation in price reflecting the differences in distances involved.

Table I shows the relative distances from representative competitive crude sources in western Canada and the United States to these interior continental markets. The reason for successive price reductions in Canadian crude as the market has expanded farther east is readily apparent from these relative distances. The disadvantage for Canadian crude in the fringe market of Ontario is reflected in the lower price obtained at the well for Canadian crude as compared with competitive United States crude.

When markets accessible to crude oil moved by ocean tanker are considered, a different competitive basis is involved. Here the competition







to be met is that of the low cost off-shore crude from Venezuela and the Middle East. (The higher priced United States crude oil no longer represents the competition which must be met in these areas.)

In Table II the equivalent relative distances from these various sources to certain seaboard markets is shown. Since some of the distances are overland and some are by sea, it has been necessary to convert the mileages to equivalent distances for comparison. For equal distances, pipe line transportation via large diameter pipe lines costs two to three times as much as transportation by super tanker. For purposes of this comparison the tanker miles have been divided by the minimum factor of two in expressing the total distances in equivalent pipe line miles.





TABLE II

EQUIVALENT DISTANCE FACTORS

Seaboard Continental Crude Oil Markets for  
Canadian Crude

	Distances in Miles			(In Equivalent	
	Pipeline	Tanker	Total	Pipeline Miles)	Canadian Crude
				Adv.	Disadv.
			Equiva- lent Pipe line Miles		
Puget Sound Market					
From Edmonton	700	....	700	....	....
Venezuela	....	5,000	2,500	1,800	....
Persian Gulf	....	10,800	5,400	4,700	....
San Francisco Market					
From Edmonton	700	800	1,100	....	....
Venezuela	....	4,200	2,100	1,000	....
Persian Gulf	....	11,100	5,550	4,450	....
Montreal Market					
From Edmonton	2,300	....	2,300	....	....
Venezuela	200	2,000	1,200	....	1,100
Persian Gulf	....	8,300	4,150	1,850	....

It will be noted that on the west coast Canadian oil has a marked transportation advantage. Middle East crude, however, because of its lower well price remains competitive in these areas. On the eastern seaboard, as exemplified by Montreal, Canadian oil has lost most of its transportation advantage against Middle East crude and is at an actual disadvantage compared with Venezuelan crude. The significance of these figures is that they demonstrate that Canadian crude's competitive position is relatively speaking better by two to three thousand miles on the west coast than at Montreal. In other words, competing against the same crudes, western





Canadian oil is much better fitted by basic location to fight for the market on the western rather than the eastern seaboard.

The distance figures in the above tables are merely a simplified manner of bringing out the competitive position of Canadian crude in certain markets and the reason why it is generally accepted that the interior continental and west coast markets are preferred outlets for Canadian crude oil as compared to the Montreal market.

How these considerations and the several programs of expansion which have resulted from them have worked out in practice is illustrated in the insert charts which follow. Chart 1 summarizes the build-up over the years since the discovery of Leduc of the various segments accounting for the total Canadian crude market. Chart 2 shows a further breakdown of the data for the past few years so as to bring out the quarterly variations from the annual averages.

---(See pages 19 and 20 for Charts 1 and 2).

#### V. THE CURRENT DECLINE IN CRUDE OIL MARKET

During 1957 production of crude petroleum in Canada suffered an interruption of its long-term growth trend. This trend, which showed substantial year-to-year production increases since the







discovery at Leduc in 1947, and registered a 6 per cent increase for 1957 over the previous year, had turned downward by the third quarter of last year. Indications are that these lower producing rates are continuing in the early months of 1958. There are a number of reasons for this current slump.

Petroleum today supplies approximately 50 per cent of Canada's energy needs. It provides the motive power for three-quarters of our entire transportation facilities, fuel for about 40 per cent of our residential and commercial heating and a similar percentage of the total energy required for industrial and other purposes. With the increasing use of petroleum in our economy it is natural that cyclical business trends influence the demand for petroleum products. Thus the downward adjustment in Canadian business activity, which began in the summer of 1957, was reflected in petroleum requirements.

Petroleum was not alone in this decline. An analysis of various business indicators reveals a similar, and in some cases a more pronounced, decline in economic activity.





BUSINESS INDICATORS, By QUARTERS

Percentage Increase or Decrease, 1957 -- Over  
Similar Periods - 1956

	1st Quar.	2nd Quar.	3rd Quar.	
	1st Quar.	2nd Quar.	3rd Quar.	4th Quar.
Index of Ind.Prod.	+ 4.9	+ 1.5	- 1.5	- 4.9
Durable Goods	+ 4.8	- 4.1	- 8.0	- 10.3
Steel	+ 7.2	- 2.0	- 4.7	- 19.9
Railway(Carloadings)	- 5.6	- 9.9	8.3	- 9.2
Motor Vehicles	+ 18.9	- 19.4	- 18.5	- 29.6
Newsprint	+ 3.8	+ 3.4	- 1.3	- 10.1
Lumber	- 14.1	- 6.0	- 13.8	- 15.3
Crude Production	+ 15.0	+ 27.8	+ 3.3	- 16.7

These recessionary influences affected in some degree the demand for petroleum products and in turn production of petroleum in Canada during the latter part of 1957.

Secondly, it became clear late in 1957 that petroleum product inventories had reached an unsatisfactorily high level. Inventories maintained a satisfactory relationship with product demand during 1955 and the first half of 1956. However, during the last half of that year product inventories increased more sharply than demand. This state of higher than normal inventories in relation to demand continued through much of 1957. When it became apparent that demand was declining, liquidation of surplus inventories became a necessity. This reduction of inventories was reflected in lower crude running at refineries and lower crude petroleum requirements. An analysis of this problem indicates a continuation of inventory





liquidation during the early months of 1958.

However, once this has been accomplished to the satisfaction of the individual refiner, refinery runs will again bear a more direct relationship to product demand.

Weather has a direct influence on the demand for Canadian crude oil. In recent years there has been a sharp shift to automatic heating with oil in Canada. Oil has provided the source of heat for virtually all of this growth because of the unavailability of gas in many metropolitan areas. Heating oil demand is related to the weather, to new housing construction, and to the conversion to oil from other fuels. During 1957 the weather in Canada was 6 per cent warmer than the year previous and 4 per cent warmer than normal. More important, in the heating season September, 1957 through March, 1958, the weather was 5.6 per cent warmer than last year and 8.1 per cent warmer than normal. This warmer weather had an unfavourable influence on the demand for Canadian crude.

With the introduction of natural gas in many of our metropolitan centres oil is now facing new competition in the home heating and industrial markets.

These then are the principal domestic factors which have influenced the demand for crude







petroleum in Canada during the past few months. To a large extent they are beyond the control of the petroleum industry.

There is one additional factor that is affecting the demand for petroleum during this spring. Refineries require periodic shut-downs for maintenance inspection and repair, to provide continuing efficient and safe operation. These periods are called "refinery turnarounds" and usually occur every 12 to 18 months. They last about a month to six weeks. During these turnarounds no crude oil is processed and thus the purchasing of crude oil is reduced. The indicated scheduling of refinery turnarounds in many areas of Canada this spring will adversely affect crude production. However, this could speed inventory corrections, so that subsequent crude processing would offset this temporary decline.

Some of the factors which affected the domestic demand for Canadian crude also affected the external markets for Canadian crude in the mid-west and Pacific north west area of the United States. The business recession in the United States reduced petroleum product requirements to the extent that there was no growth in United States domestic demand last year. Inventories which had been carried in anticipation of a continuing high market demand suddenly





became excessive, necessitating liquidation. The inventory problem was further complicated by excessive stocks which had been built up in many areas during and after the Suez crisis.

As soon as the Suez crisis was settled, normal supply lines were restored but before supplies could be fully adjusted United States Gulf coast refiners were left with excessive inventories of product. Warmer weather in the winter season of 1956/57 in the eastern United States further added to the problem. With a reduced demand in that country, high inventories continued and United States crude production declined. The sharp drop in ocean tanker rates which followed Suez made it possible for low cost foreign crude to move in increasing quantities into United States coastal markets and replace to some degree United States crudes, thereby further shutting in United States production. The combination of these factors resulted in the establishment of voluntary import quotas on foreign crude moving into the United States, first into the eastern part of the country and later into the west coast. The same inventory and market factors which led to the establishment of crude import quotas in the United States have contributed to a decline in the current Canadian crude requirements of United States refiners. Because of these overriding market considerations,





demand for Canadian crude has so far been insufficient to be limited by import quotas.

During the Suez crisis Canadian crude production was temporarily inflated by the movement of Canadian crude to the California market. This was made economic by the shortage of ocean tankers at that time and the resultant high tanker rates. When the Suez crisis was settled ocean freight rates declined sharply and, coupled with surplus low cost foreign crude, made Canadian crude no longer attractive to refiners in the California market.

Thus the decline in Canadian crude production during the latter part of 1957 and early 1958 was due to a number of factors many of which were prevalent worldwide.

It was not, as some have suggested, due to increasing imports of foreign crude petroleum and products into Canada in 1957. Crude imports into eastern Canada totalled 306,000 barrels per day last year, an increase of 14,000 barrels per day over the previous year, or approximately 5 per cent. This was about equivalent to the total increase in domestic demand for petroleum products during the year and was due in some degree to increased crude requirements for the expanded Halifax refinery to replace product imports. Thus, this increase was offset to some extent by a decline in







product imports of 4,000 barrels per day during 1957, to a level of 95,000 barrels per day. Some of these product imports are necessary for two reasons. They are required to supply products of a kind not manufactured in Canada. Secondly, since heating oil demand in relation to gasoline demand is greater in some areas than can be produced from crude processing, it is necessary in these areas to import middle distillates and heavy fuels.

In summary, an unfortunate combination of circumstances, all acting in the same direction, have brought the current production of Canadian crude to an abnormally low level. Many of these factors are not basic but cyclical and random in nature, and thus temporary in their effect.





VII. OIL PIPE LINE FINANCING AND REGULATION. In considering questions of pipe line financing and regulation, a clear distinction must be made between the "gas" pipe line and the "oil" pipe line. The trunk gas pipe line is a monopoly which purchases, transmits and sells gas (a usable finished product) on long-term contracts. Continuity of operations is thus secured by long-range commitments of supplies and sales extending perhaps for 20-25 years. Also, the sole transportation medium for gas is the pipe line.

On the other hand, the oil pipe line is a carrier only, and not a purchaser or seller of oil. Crude oil (a raw material) is purchased by refiners who normally can make only short term commitments in order to maintain flexibility of supply against changing supply sources and changing demand. Therefore the oil pipe line is simply a specialized form of transportation, competing with other methods of moving liquid petroleum and with other sources of petroleum.

This discussion pertains to the oil pipe line, particularly in the transmission of crude oil.

Transportation cost is an extremely important element in the final cost of petroleum products. It is a key factor in the competitive position of the producer, refiner and marketer, representing 20-25 percent of the delivered price of petroleum products





to the consumer. Pipe lines represent the most economical means of land transportation where volumes are sufficient to justify the investment. Substantial savings are then available as compared with less specialized methods such as rail or truck. The reduction in transportation cost varies with volume, length of haul and the transportation method displaced.

Producers may for instance, secure substantially higher wellhead price if pipe line movement can be utilized, rather than truck or rail. Similarly, refiners utilize pipe lines wherever possible for movement from refinery to distribution terminals. In short, the pipe line represents an operating facility, and the producer or refiner cannot wait for outside capital to initiate a pipe line project. The pressure of competition to reduce transportation costs is the basic stimulus forcing the oil industry into building and operating lines.

Physical characteristics of oil pipe line operation bearing on this subject can be summarized as follows:

1. It is fixed in geographical location and cannot be shifted with traffic pattern changes.
2. It is a one-way, one-purpose, facility.
3. It deals with a few customers whose refining operations can be substantially affected by the pipe line operation.







4. The capital investment is large and almost entirely employed in fixed plant. By corollary, total operating costs are relatively inelastic to volume since interest and depreciation charges form a substantial portion.

FINANCING: The specific purpose of the oil pipe line and its physical characteristics mainly determine the method of financing. Historically, for reasons noted previously, individual oil companies have built and owned pipe lines as they would any other facility in their operations. In recent years, however, the trend toward greater distance and larger diameter pipe lines has involved capital investments and throughputs much larger than any single company could undertake. Joint ownership has therefore evolved.

Public participation in pipe line financing in Canada was initiated by Imperial at the time of the Interprovincial Pipe Line development. The hope was to secure widespread participation from the individual investors in the equity financing of a project new to Canada and to Canadians.

The form of financing of large oil trunk line systems has logically developed to fit the characteristics of the operation. The normal financing pattern has been to borrow as much of the capital requirements as possible through bonds or debentures supported by oil company throughput or





deficiency agreements. Thus debt financing is secured at a relatively low interest rate and the resultant leverage on the equity capital has been attractive to the investor.

In summary, the pipe line must be recognized as a primary facility to the producer, refiner and marketer, having developed to meet operating needs. It serves the same purpose as the tanker, the tank car or truck, and to this extent is not a general carrier.

Financing therefore cannot depend on normal entrepreneurs or independent investor action. Initiation should come from the industry and financial structure depends on the physical characteristics of the project, vis-a-vis the investor's requirements. These involve:

1. The large capital amounts required;
2. The return on total investment is limited by the pressure to minimize transportation costs;
3. Because of (2), financing entirely by equity capital is not possible, and
4. Because of its specialized service, outside financing is not possible without throughput or deficiency guarantees that can only be given by an oil company.

PIPE LINE REGULATION: Regulation and control of private enterprise in a free economy





is presumably designed to guard the public interest where there is a clear danger to such interest. Since oil prices are limited by competition, and the oil pipe line is a means of minimizing transportation costs, the public interest in the operation of oil pipe lines could be confined to safety, public nuisance, etc. Nevertheless oil pipe lines in Canada are under regulation by both provincial and federal government legislation. This discussion pertains only to federal government legislation, and in particular the Pipe Lines Act, R.S.C. 1952, cap. 211. A more detailed examination of this Act is included in Appendix D supplementing the following general comments:

Jurisdiction: The Pipe Lines Act and other federal legislation define federal control over interprovincial pipe lines, and federal jurisdiction has been interpreted to include all pipe lines connected to interprovincial systems. Thus, if a flow-line from a well crosses a provincial boundary or a gathering system in a pool connects to an interprovincial system, it is considered to be within federal jurisdiction. Theoretically all companies operating such pipe lines would be required to have a charter granted by special act of Parliament and be removed from provincial jurisdiction. This has brought direct conflict with provincial jurisdiction, particularly in respect to matters of conservation of







natural resources.

The British North America Act places control of most natural resources with the provinces. In exercising this control, the various provincial governments have assumed the right to grant exclusive permits to provincial companies for the purpose of gathering and transporting oil from producing fields. Such gathering systems usually connect with inter-provincial trunk pipe lines and the provincial action is thus in direct conflict with the interpretation of federal legislation. Thus in the present situation the oil industry cannot in practice comply with both provincial and federal statutes. Elimination of this overlapping jurisdiction would be most helpful to the oil industry.

Corporate Regulation: It would appear to us that the present system of regulation as applied to oil pipe lines is unnecessarily complicated and cumbersome. It is felt that the tasks currently assigned to the regulating authorities could be greatly eased by permitting the normal forces of competition as much freedom of action as possible. This could, we believe, be accomplished in considerable measure by dropping the practice of granting only single or exclusive permits for pipe line construction.

At present the Board of Transport Commissioners must review not only the physical





but also the economic aspects of an application for a pipe line permit. Physical aspects insofar as they affect safety and public nuisance are obviously matters of public interest. On the other hand, it is our view that it is not necessary and, in fact, unduly onerous for the Board to have to examine economic factors, including the details of oil reserves, availability of markets, financing, and so forth. The economics of the project and in turn its ability to finance should constitute an automatic selection procedure without the necessity of a single or exclusive permit system. Close analysis by the professional investor would enable only the most economic projects to be financed. The public should be adequately protected in respect of any investment it may make in such pipe lines under the provisions of the present securities laws.

We also believe that the present requirement of incorporation by Special Act of Parliament is likewise an onerous burden on Parliament and frequently a source of unnecessary delay in dealing with pipe line developments.

Rate Regulation: Given free play competition between projects and the normal competitive pressure to reduce transportation costs tend to make rate regulation of oil pipe lines unnecessary. The history of modern regulatory bodies in Canada confirms this tendency since to our knowledge there has not been





any instance of enforced rate reduction. On the contrary, rates have voluntarily responded to competitive pressures and to increasing volumes, with the result that tariff reductions have been the general trend as volumes have increased.

Having in mind the purpose of oil pipe lines, we believe it unlikely that rates of return or tariffs will be established which could be considered an abuse or injurious to the public interest. The oil pipe line, as distinguished from the gas pipe line, has no franchise on the supply of a public commodity. It is not a public utility and indeed has an element of risk not common to other carriers.

There is a constant shifting in oil logistics occasioned by such factors as new discoveries, depletion of older fields, developments in competitive fuels or in competitive transportation facilities. The prospect of crude discoveries closer to an existing market is always present. So, also, the opening up of a closer and more favorable market large enough to absorb the full output of a producing area could force the existing market to seek an alternative source of supply. Either possibility, if realized, could cause the idling of some or all of a crude pipe line.

A few examples are listed:

1. For many years, Imperial owned and







operated the Transit and Storage pipe line connecting its Sarnia refinery to Mid-Continent trunk line systems terminating in Ohio. With the advent of Canadian crude via the Interprovincial system Transit & Storage was put out of business.

2. The history of capacity increases in the Trans Mountain pipe line, starting in 1953 at 120,000 b/d and increasing by late 1956 to 185,000 b/d is even more dramatic. At this stage capacity was fully utilized and further expansion was started. Before this was complete, unpredictable political events and changes in market conditions reduced demand so sharply that in recent months deliveries have been at a rate of about 50 percent compared with a year ago, and at a level of only 40 percent of the expanded capacity.

3. The advent of crude discoveries closer to existing markets is another element of risk to pipe lines. Interprovincial expanded the capacity of its Edmonton/Regina section to meet increasing demands of eastern markets. At this point, new discoveries and development of substantial Saskatchewan production displaced oil from the Edmonton/Regina section.

Such fluctuations in volume are experienced by all pipe lines and can be expected to repeat since crude oil markets are not captive and sources of supply also change.





SUMMARY. In summary, our views on pipe line financing and regulations are as follows:

1. Oil pipe lines and gas pipe lines are separate and distinct operations.

2. The oil pipe line is essentially an industry facility and its operation is similar to that of any other specialized industry equipment.

3. Public interest in oil pipe line operation can be adequately protected by competition and the pressure to reduce costs, together with existent security legislation.

4. The present Pipe Lines Act has undesirable features which can be considered a burden to Parliament and to industry. Specifically it is suggested that:

(a) The mechanism of issuing federal pipe line permits can be simplified and confined to an examination of the safety and nuisance aspects of the project by the Board of Transport Commissioners. The Board should also be free to issue permits to any project satisfying these physical tests.

(b) Some action is needed to eliminate the present jurisdictional conflict between federal and provincial regulatory authorities.

THE CHAIRMAN: Thank you very much, gentlemen. We will now adjourn the hearing until two o'clock, this afternoon, in this room.

---Whereupon the hearing adjourned, at 12.25 p.m., until 2.00 p.m.





---On resuming at 2.00 p.m.

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearing.

Mr. White?

MR. WHITE: Mr. Chairman, Mr. Twaits will deal with Section VI.

MR. TWAITS: VI. Future Market Alternatives: While the explanation of the current slump in western Canadian crude production may be interesting, it is to the future we should turn our attention. In considering alternate routes which might be followed for future Canadian crude markets, it should be recognized that in such a fluid and rapidly changing industry no course is without its risks and uncertainties. However, there are certain tests which a satisfactory proposal should meet so far as possible:

- (a) Preserve a reasonable incentive for exploration.
  - (b) Preserve flexibility to secure the economically most advantageous markets in the long run.
  - (c) Avoid imposing long term disadvantages on particular sectors of the economy or the consumer.
  - (d) Avoid insofar as possible artificial supports or controls which could tend to undue increase or rigidity in government controls.
- With such tests in mind, we should like to







consider three alternative approaches to the future market problem (our estimates of possible market volumes under these several cases cover the coming critical five years only, since the long run adequacy of markets is little questioned):

1. A minimum or "do nothing" approach.
2. A maximum or "all out" method involving construction of major pipe line facilities to Montreal.
3. An intermediate route involving positive efforts, short of a pipe line to Montreal.

May I say, parenthetically, here, that since this matter has been under study for some time, it should be noted, as to Item 3, that some of these efforts are already under way.

Minimum Case: The first of these routes can be dealt with very briefly. What is involved here may be summed up as awaiting the end of the current cyclical dip and depending thereafter on normal growth in the markets already supplied with Canadian crude. Assuming the business recession will have run its course in 1950 we believe that a reasonable estimate of the demand for Canadian crude in this case would be approximately as follows:





	Domestic	Export	Total
1957	350,000	150,000	500,000 barrels per day
1958	370,000	94,000	464,000
1959	409,000	125,000	534,000
1960	434,000	146,000	580,000
1961	463,000	163,000	626,000
1962	492,000	180,000	672,000

The domestic requirements are assumed to return to the normal trend growth, with the increases in domestic demand from British Columbia to Ontario covered with Canadian crude. The export estimates assume that with return to normal demand, United States refiners using Canadian crude will fully utilize their import quotas and that these quotas will be adjusted thereafter to meet the normal growth in United States market demand.





While the above estimated requirements represent an appreciable improvement on the present depressed condition, they do not increase as rapidly as would appear desirable, particularly in the early part of the period.

The Montreal Case: From the standpoint of volume of market outlet for Canadian crude, the advantages of supplying the Montreal market are obvious. Assuming that the major pipe line construction to supply Montreal would be in operation in 1961, it is estimated that the market for Canadian crude might be about as follows:

	Domestic	Export (barrels per day)	Total
1957 - - - -	350,000	150,000	500,000
1958 - - - -	370,000	94,000	464,000
1959 - - - -	409,000	125,000	534,000
1960 - - - -	434,000	146,000	580,000
1961 - - - -	736,000	113,000	849,000
1962 - - - -	776,000	130,000	906,000

In other words, in 1961 and 1962 there would be a net increase over the "minimum" case previously discussed as follows:

	1961	1962
Increase in eastern Canada		
Montreal - - - - -	252,000	263,000
Ontario - - - - -	21,000	21,000
Decrease in west coast export -	-50,000	-50,000
Net Increase - - - - -	<u>223,000</u>	<u>234,000</u>

The Ontario and Montreal refineries would be fully covered with Canadian crude except for a small volume of "specialty" type and balancing foreign crude. However, throwing large volumes of foreign crude back







on the world market would undoubtedly create strong pressures to find a home for this oil elsewhere with the result that Canadian crude oil's position in the west coast export market could be seriously undermined. In other words, the necessity of securing outlet would undoubtedly force some of this displaced crude oil into Puget Sound. Therefore, the above estimates allow for the loss of a major portion of the United States Puget Sound market in 1961 and 1962.

Placing the Montreal market on Canadian crude oil would raise difficult problems, fundamentally economic and long-range in nature. What the precise competitive position of Canadian crude vis-a-vis Venezuelan or Middle East crude might be at the time of the completion of pipe line facilities or at various times thereafter it is impossible to predict. Perhaps the best that can be done is to consider relative prices as they exist today and speculate with respect to what future trends may bring.

The positions of theseveral individual Montreal refiners in utilizing Canadian crude would undoubtedly vary. However, we estimate that if today there were a large efficient pipe line from western Canada to Montreal the disadvantage to Imperial Oil Limited's refinery in utilizing Canadian versus imported crude would be at least 25 cents per barrel as shown in the table following.





Comparison of Current Price for Imported  
Crude with Theoretical Price for  
Canadian Crude at Montreal

Redwater Crude -- 35° Guanipa Crude -- 31°

(a) <u>Charges in U.S.\$</u>			
F.O.B. posted price - - - - -			2.800
Tanker rate (USMC - 45%) - - - - -			.226
Outturn and terminalling - - - - -			.035
Pipeline allowance - - - - -			.015
Pipeline tariff -- U.S. funds portion	0.270		.060
Subtotal -- U.S. funds - - - - -	0.270		3.136
Canadian equivalent			
@ \$1 U.S. = \$0.97 Canadian - - - -	0.262		3.042
(b) <u>Charges in Canadian \$</u>			
Wellhead - - - - -		2.560	
Gathering and other charges			
to Edmonton - - - - -		.083	
Pipeline allowance - - - - -		.026	
Pipeline tariff --Edmonton to Montreal			
Canadian funds portion - - - - -	.330		0.030
Subtotal - - - - -	2.999		3.072
Total equivalent Canadian \$ - - - - -	3.261		3.072
Adjust to equivalent quality - - - - -	-		-
Add charge for idle Portland/Montreal			
Pipeline and terminal - - - - -	.07		
Add interest on added inventory in transit-	.01		
Comparative Net Costs - - - - -	3.34		3.07

The major concern, however, centers on the strong probability that the disadvantage might widen markedly during the 30-year period required to depreciate the pipe line. Aside from the fact that the foreign crude price situation is shaky today, the longer term concern stems from certain basic factors of competitive disadvantage.

1. First of these is the size of foreign crude oil reserves already proved (no additional finding cost required). Proved reserves outside continental North America and the Soviet area today stand at 198.5 billion barrels, equivalent to 73 times last year's rate of production. By comparison Canadian





proved reserves of 2.75 billion barrels are equivalent to 15 times 1957 production. Future increases in finding costs are likely, therefore, to affect Canadian costs more than those in the prolific foreign areas. (For purposes of comparison, United States proved reserves of 33.5 billion barrels were 13 times 1957 production.)

2. Development and lifting costs are comparatively very low in many foreign areas due to the high productivity of individual wells. Canadian wells at full efficient productive rates average about 77 barrels per day per well. However, the Venezuelan average is about 250 barrels per day per well and that in the Middle East a striking 4,400 barrels per day per well. (Again for comparison, United States wells at full efficient rates average about 17 barrels per day per well.)

3. Because of his lower costs the foreign producer generally starts today with a relatively wider profit margin available for competitive action. In addition, his incentive to sell his own production is greater than that of the pro-rated producer who must purchase a considerable number of barrels from others for each additional barrel of his own production.

With the basic economic disadvantages to Canadian crude oil in the Montreal market, the question must, therefore, be asked as to who will







pay the bill to make it (and more importantly -- keep it) competitive in price with imports into Montreal. Let us consider the problems of the producer, the refiner and the pipeliner.

Problems of the Producer: Under normal circumstances, the producer, who stands to gain additional market outlet, would assume the cost involved in lowering his price to meet that of the competition. His ability and interest in doing so would, of course, vary directly with the percentage increase in net outlet which he would secure and inversely with the percentage reductions in price and per barrel profits which he would have to assume. In committing himself to a long-term reduction in price he would be writing down to this extent the value of his existing and future reserves. On the other hand, from a present worth standpoint there would be the advantage of earlier realization on such reserves. In determining whether the price reduction would in the long run be worthwhile, careful consideration would have to be given to factors such as future replacement costs and to the tendency over the years for the proposed Montreal outlet to represent a declining factor in the total expanded Canadian crude outlet of the future.

The impact of price versus volume on individual producers in western Canada will vary greatly since the extent to which added market means added





production varies widely. Based on the current situation, volume of production in Saskatchewan and Manitoba fields would be little affected since where quality permits they are normally allowed to produce at potential. For Alberta, a study we have made of February, 1958, data indicates the following:

	Fields	Wells
Fields on economic allowance		
and on total MPR - - - - -	70	2292
Fields being prorated - - - - -	<u>52</u>	<u>5028</u>
	122	7320

The 52 prorated fields would gain volume from new market penetration but more than 95 percent of the increased volume would come from 14 of these fields. This concentration of shut-in capacity in a relatively few fields would result in relatively few companies securing most of any increased production. Our February study would indicate that at that time some 95 percent of any increase in volume of production would accrue to 28 of the approximately 220 companies owning production in western Canada. From these figures it may, therefore, be concluded that any price reduction would represent a net loss to many producers, and that to a much smaller number revenue from increased volume would compensate in markedly varying degrees. At this point, it seems worth repeating that the Canadian producer is already realizing a price at the wellhead appreciably less than other Western Hemisphere crudes and any substantial sacrifice in such realization would take away





exploration incentive.

The total volume of oil committed to the Montreal market over the 30-year life of a pipe line would be roughly equal to the total of today's proved reserves. With a reasonable prospect that over the years nearer and more attractive markets for western Canadian oil would sharply increase, there would appear to be a grave risk in being committed to a more distant market regardless of the price it might bring to the total production.

Thus, in general, it would not appear that the producer could afford to take an open-end commitment for himself or future new producers to supply the Montreal market for 30 years at the risk of whatever lower price might be required to be competitive in that market.

Problems of the Refiner: The cost of crude oil represents the Montreal refiner's major item of expense. He cannot, therefore, sacrifice the flexibility of competitive sources of supply and risk a long term commitment without assurance of price protection to the extent needed against competitive sources of crude oil or refined products.

As a basic corollary of our competitive system, a refiner confronted with added costs has but two alternatives:

1. Recoup such added costs in the long run in higher prices than would otherwise prevail.







2. Fail to recover his fixed charges and gradually go out of business if other refiners or product importers have lower costs permitting them to set lower competitive prices.

Suggestions have been made that Montreal refiners might absorb a higher cost of Canadian crude oil up to the extent of the existing duty protection on refined products. In order to foster secondary industry, the present duty structure provides the Canadian refiner with duty protection equivalent to roughly  $\frac{1}{2}$  cent per gallon **of** crude. It should be recognized that:

1. There are a number of factors generally characteristic of the Canadian petroleum refining industry which add to its costs compared to those of refiners in other countries supplying products for import. These include:

(a) Somewhat higher capital costs. These reflect such factors as winterized design and winter construction, duty protection on Canadian materials, added freight on other materials, etc.

(b) Higher fuel costs for refinery operation.

(c) Generally smaller size with resultant higher unit costs, despite slightly lower labour rates. Even the largest Canadian refineries represent a multiplication of smaller units added as business has grown rather than single large units.

(d) Additional costs of redistribution. Refined





products can be imported direct to major distribution points within a broad refining area. The Canadian refiner must absorb the cost of transshipping to such points.

(e) Because the sales tax does not apply on the transportation portion of a laid-down price, the sales tax levied on Canadian refined products is slightly higher than on imported products.

(f) On the average, tanker rates on "dirty" products and crude oil tend to be slightly lower than for "clean" products. This is offset, however, in the case of an importer of products into Canada by his ability to average lower seasonal tanker rates during his import season than the year-around average.

(g) The product importer into Canada in general secures his products at the seasonal low price of the exporting refinery rather than at the average price realized by such refinery.

2. Prices of imported products represent a ceiling to the Canadian refiner but not necessarily a floor. It is, of course, obvious that any duty structure must be national in scope. However, in any case where full duty protection may not be required, competition of the Canadian refineries within such area will tend to eliminate imports of some products by setting the price level below the cost laid down of imports. Statistics show





that the importation of gasoline, the refiner's principal product, has for practical purposes been eliminated from the Montreal area.

Consideration of the above factors leads to the conclusion that unless sooner or later the refining industry is to be liquidated, the price paid by the customer in the Montreal area will over the years increase or decrease with the cost of crude oil to the refiner.

It is difficult to see how a Montreal refiner can justify guaranteeing the throughput of a pipe line which would establish a floor on his cost of crude oil. This is particularly true here, because the crude oil in question is at a basic competitive disadvantage with other sources of supply and offers no hope of future reductions in his cost.

Problems of the Pipeliner: As a characteristic of pipe line transportation, coverage of the fixed and capital charges represents a large portion of the tariff charged. The pipeliner must, therefore, assure himself and his source of capital of a continuing revenue at a level high enough to be commercially attractive. Thus, he cannot serve as a buffer between the producer and refiner to equalize changing market relations through fluctuating pipe line tariffs.

As will be more fully developed later, oil pipe lines are not and should not be considered







(b) direct Canadian crude from Montreal to more attractive nearer markets,

(c) cause policy of future governments to change.

Under these circumstances, it appears doubtful that a simple provision for a protected market would give sufficient permanency to raise the necessary funds.

The government could, of course, provide a direct guarantee of the pipe line bonds. If this course were followed and the government underwrote the major risk, it is worth asking whether public sentiment would permit private ownership of the line or whether another link toward government control of the industry would be forged.





to be in the same category as public utilities. Hence, returns which might be satisfactory for the low risk assured return utility monopoly are unlikely to be commercially attractive to the high risk competitive oil pipe line.

In view of the evident economic risks in building a large pipe line to Montreal, it appears clear that the financing of such a line would require some form of guarantees beyond those which the pipe line company itself could provide.

The normal procedure would be to secure throughput or deficiency agreements from the refiners or producers. For the reasons we have previously discussed, it would appear improbable that these groups would wish to assume the open end risks involved in such a long term commitment.

Under these circumstances some form of government guarantee would seem to be the only alternative. (A guarantee, incidentally, which would put another pipe line -- Portland/Montreal -- out of business.) The government might, for example, enunciate a policy of protection for the Montreal market and establish the necessary detailed machinery to place it in effect upon completion of the pipe line. However, there are risks that changing conditions might:

(a) make such machinery inadequate or obsolete,





Mechanics of Control: There are a number of methods that might be applied by the government to provide protection for the Montreal movement. However, they all present problems either in their administration or in their implications for the future freedom of the industry or both.

A - Subventions - Perhaps the most direct and forthright approach would be through the application of subventions to cover the difference in laid-down cost of the crude at Montreal. Determination of the proper figure and its variation with market conditions would be difficult, and there would obviously be legitimate government interest in the wellhead price established for Canadian crudes. Finally, it would be an understatement to say that this approach would lack appeal to the general taxpayer and voter.

B - A voluntary quota approach has been suggested, perhaps by analogy with the current involved efforts in the United States. Such a system is capable of dealing with marginal or temporary situations but is not suited to provide a permanent solution to the complex Montreal problem. In the case of a Montreal pipe line once installed we are dealing with a permanent situation which would require a permanent protection.







The impracticability of voluntary quotas in the long run lies in the inevitable inequities involved. Those who conform do so at a competitive disadvantage with those who do not. The Montreal refiner could not long justify compliance if other refiners or product importers in all of eastern Canada did not do likewise. Full compliance by all would be tantamount to mandatory quotas.

C - Mandatory quotas could provide the necessary protection. They would, however, have to be comprehensive and complicated. They could not be limited to crude oil for the Montreal refineries. As previously developed, it would be necessary to place quotas on most refined products as well as crude oil to prevent imports of products from lower priced foreign crude from gradually liquidating the Montreal refinery operations. Similarly quotas on imports into the Maritimes would be needed to prevent increased running of foreign crudes in that area with shipment of products into Quebec.

Thus it would, in fact, be necessary to erect a protective fence completely around the country. Establishment of the proper quotas would tend to freeze company positions and in any event would lead the government





into the awkward position of fully controlling the oil supply and demand with frequent adjustments to maintain the proper balance.

D - Import duties would in many ways be the simplest approach. These would, of course, have to be nation-wide in their application. Also any crude duty would for reasons previously discussed have to be reflected in equivalent increases in duties on refined products imports if the important secondary refining industry is to be maintained.

Administratively a difficult problem is imposed in establishing duties at the proper level so as to exclude the proper amount of imports while minimizing as far as possible the added cost to the consumer. Trial and error methods of establishing the proper level would be complicated by rapid changes in petroleum market conditions.

In summarizing the problem of protection for the Montreal market, two principal end results are indicated:

1. Higher cost to eastern consumers (or to the taxpayer).
2. An alarming degree of necessary government control with the corresponding threat to the freedom which has contributed so much to the development of the Canadian oil industry.





An Intermediate Case: In view of the inflexibilities of enforced crude movement to Montreal, it would appear worthwhile considering what alternative constructive steps might be taken to improve the market volume for Canadian crude oil.

(a) The Ontario market. The largest single market for petroleum products in Canada is that in Ontario. Today the largest portion of that market is supplied with products from refining of Canadian crude oil. In addition, however, sizeably volumes of products are supplied by direct imports, by shipment from Montreal refineries, and by limited volumes of imported crude oil refined in Ontario.

From the standpoint of simple geography, it is apparent that Ontario is a more economic market for Canadian crude than is Quebec. There would appear to be reasonable statistical possibilities of using pipe line capacity and Ontario refinery capacity already in existence or capable of early completion to increase Canadian crude utilization by up to about 75,000 - 80,000 barrels per day. Each supplier's situation is, of course, different and we can speak only for Imperial Oil. However, for our part, we have been meeting and plan to continue to meet essentially our full Ontario marketing requirements with products from Canadian crude. We are currently expanding our Sarnis refinery capacity by 20 percent. We are also increasing refinery yields of furnace fuel in the hope







of selling competitively to those importers who traditionally shop for such products in world markets during the summer.

Canadian crude is already committed to the Ontario market, supported by large capital investments in transportation and refining equipment. In order to penetrate this market, as previously noted, a severe reduction in the wellhead price of crude oil was necessary to make Canadian crude competitive with alternative sources of supply.

Accordingly, it is our view that the first and most important job is to saturate and to secure this Ontario market before undertaking any new obligations and facing the more severe competitive pressures of the Montreal market.

(b) Puget Sound. Another market where a higher degree of saturation is worth seeking is the Puget Sound area of the United States. For the immediate short term future the heavily overstocked inventory position of the United States west coast precludes large increases in this direction. However, when the statistical position returns to normal there would appear to be room for marked improvement, even under the existing United States import quota limitations. Total quotas available to west coast importers can be expected to continue to exceed those required for full operation of the Puget Sound refineries. From our earlier discussion, we have also seen that the





combination of Canadian crude in Puget Sound and foreign crude in Montreal is economically much more attractive than the reverse combination of Canadian crude in Montreal and foreign crude in Puget Sound. These considerations would appear to set the stage for possible purchases and sales where Canadian crude would be sold to Puget Sound refineries and the foreign crude which might otherwise be sold to that area would be purchased for Montreal. For example in our own case, as was stated earlier, for many months Imperial Oil has been refining at Montreal 11,500 barrels per day of Venezuelan crude purchased from a non-affiliated company and has been selling similar volumes of Canadian crude into the United States Puget Sound. That purchase and sale, I may add, has been going on for two years.

It is of interest to estimate what the volume of Canadian crude outlet may be if a high degree of saturation of the Ontario and Puget Sound markets is successfully achieved. Our studied estimates for this case are as follows:

	Domestic	Export	Total
1957	350,000	150,000	500,000 barrels per day
1958	370,000	94,000	464,000
1959	489,000	135,000	624,000
1960	513,000	171,000	684,000
1961	538,000	193,000	731,000
1962	567,000	245,000	812,000





These figures represent a net increase in market compared to the "minimum case" previously considered of 90,000 to 140,000 barrels per day beginning in 1959. Compared to the all out Montreal case they represent quicker action with a marked improvement in 1959-1960. In 1961-1962 they are about 110,000 barrels per day lower than the all out Montreal case.

What then might be the producer's situation under this intermediate case? He would obviously benefit from the improved market during the earlier years when improved crude outlet is especially important. Let us consider what the prospects might be for maintaining finding effort and activity at a tolerable level.

In this connection the chart on following page (33 of original brief) has been prepared showing Canadian crude oil producing potential, production, and the percentage relation of production to potential. The solid lines represent actual history while the dotted lines represent our estimates of future potential as discussed earlier and our estimates of production under the "intermediate" market case just presented. It will be seen that in the past ten years, during a period of aggressive activity, the production has varied over the range of 50 to 70 percent of the potential, reaching a high of 71 percent in 1953-1954. This would appear to be an indication that the industry traditionally develops potential







production well in advance of possible market outlet.

The estimates on the dotted portion of the chart indicate that after the present cyclical downturn, production in this case would again fall in the range of 50-70 percent of potential. There is, therefore, nothing in these percentage figures in themselves which would justify the conclusion that a tolerable level of activity would not be sustained over the next few years.

There is, of course, the current depressed condition of the market today, which probably will result in some lessening in exploratory activity during this year. However, for the first quarter of 1958, exploration drilling pace did not show any reduction. Seismic surveying showed some decline (after due allowance for normal seasonal shifts), but the decline in this activity has been a distinct trend ever since 1952. Thus, it would appear from the current exploration work indices that the current market slump has not yet reduced the industry activity in exploration. As discussed in Appendix B today, this is probably due to the momentum inherent in exploration programs.

Development drilling activity has declined in recent months. Perhaps the most important reason for this is that there are not as many undeveloped proved locations available now as there were a year ago when Pembina and Souris Valley development drilling





was at a high level.

Additional factors affecting the rate of drilling may be the declining allowables and the trend toward wider spacing of wells. This variation in rate of drilling is undoubtedly of concern to the drilling contractors. However, it is characteristic of the industry, both in Canada and the United States, and presumably will continue to occur from time to time regardless of level of production. It is not felt that these fluctuations have the same serious consequences as a prolonged cutback in exploration effort.

Another line of conjecture that might be followed in judging whether western Canadian producing activity can follow tolerable levels in the next few years is to consider the trends in prospective revenue likely to accrue to the industry. Imperial had studied the historical relationship between the industry's revenues and expenditures and has attempted a rough projection of cash flow into the future in order to assess the industry's ability to maintain a high level of expenditure. Our studies would indicate that even if the high rate of 1957 expenditures are maintained, improved income from gas sales and from attainment of the "intermediate case" market for crude oil would rapidly reduce the size of the annual cash deficits compared to those the industry experienced in recent years.

Exports to the United States: The status





of Canadian exports to the United States is today at a low ebb. There are a number of reasons to believe that a more favorable position should develop in the future:

1. The circumstances surrounding the present tightened United States import restrictions appear to reflect in part increased protectionism fostered by the current business downturn. Also it is reported in the press that the limitations on oil imports have been adopted partly in an effort to secure passage of the Reciprocal Trades Act Extension with its policy of generally more liberal trade. The oil limitations have apparently been framed in a purposely flexible administrative form permitting ready alteration with changed circumstances.
2. Under normal circumstances, the logic of special treatment for Canadian oil is extremely convincing both on a security and trade basis. In fact, under such normal circumstances, Canadian oil was given an exempt status. Even under present provisions allocations have been made in a manner which minimizes the immediate direct impact on Canadian oil. Undesirable as they are in principle and precedent, the present import restrictions have as yet been from a practical standpoint largely a matter







of form rather than of substance. This is because the business recession and over-stocked inventory positions have tended to hold the level of movements of Canadian oil below the quota figures.

3. Looking to the longer term future, it is widely accepted that large increases in oil imports into the United States can be expected. With 55 percent of the free world's demand for petroleum and only 14 percent of its proved reserves, the basis for increasing United States imports is evident. Deficiency areas in the northern and western parts of the United States should, therefore, provide in the future economic markets for the tributary Canadian crude oil supplies.

Full efforts should, therefore, be continued to obtain free access to U.S. markets for Canadian oil.

To conclude our comments with respect to the problem of crude oil markets, it is our judgment that weighing all factors as they appear today, the prospective advantages would not as yet warrant the risks of going to Montreal. We would recommend that first priority be given to trying to develop to the maximum the intermediate case as described in this submission.





MR. WHITE: I would like to turn to  
Section VIII of the brief, Mr. Chairman.

VIII. NATIONAL ENERGY POLICY AND  
NATIONAL ENERGY AUTHORITY

In view of the fact that a nation's economic progress depends on and can to a considerable extent be measured by its utilization of mechanical energy a national policy on energy has commended itself to many people. There is, we believe, broad agreement as to what should constitute a national policy. It should recognize that Canada's energy resources belong to the people of Canada and should be developed in their interest, as should other Canadian natural resources. It should recognize that Canadian progress is correlated with Canadian energy consumption, and that future supplies of energy producing material should be assured in the light of the best available knowledge.

With these broad principles we find ourselves in complete agreement and find cause for satisfaction in the fact that these policies seem to have been satisfactorily implemented in that Canada is not only currently the second highest per capita consumer of energy in the world, but has remaining reserves equal to several centuries at the current rate of consumption as shown in the following table -- these are pretty broad projections, but they are interesting:





	Approximate Remaining Recoverable Reserves	Years of Supply*
Natural Gas (trillions of cubic feet)	300 to 350	1,000 to 1,100
Liquid Petroleum (billions of barrels)	40 to 60	160 to 240
Tar Sands (billions of barrels)	100 to 300	400 to 1,200
Coal (billions of short tons)	47	1,400

\* At 1957 rate of consumption.

It has been estimated that about 1,000 billion barrels of crude oil will be obtained from the world's rocks. If this is the case, it appears that Canada, with 0.6 per cent of the world's population, has around 15 per cent of the world's fossil fuel energy reserves.

The estimate of coal reserves was taken from the Gordon Commission report. The ranges given for other reserves permit inclusion of various recent predictions and some allowance for Canadian sedimentary areas other than western Canada.

#### NATIONAL ENERGY AUTHORITY

Recognition of the desirability of a national policy in regard to energy has in some cases become confused with a supposed need for a national authority on energy.

This company does not believe that the establishment of a national energy authority is







feasible or necessary. There are two areas where control could be exercised, the field of domestic trade within the country or the field of export trade.

The fundamental difficulty in the creation of a federal authority having jurisdiction generally over energy within the country is that the provinces have authority over the production and sources of energy, and also control over the markets which consume energy within their individual borders.

We do not feel competent to discuss the constitutional aspects involved, but it seems to follow that any jurisdiction exercised by a federal authority would be limited to governing inter-provincial or international trade. Any effort to extend the jurisdiction of such a body would require the surrender by the provinces of their jurisdiction under some joint arrangement with the federal government. The historic experience in effecting such transfers of authority is that they involve either prolonged discussion to achieve mutual acceptance, or inter-governmental conflict if an attempt is made to impose an authority without mutual approval. The delay and/or conflict attendant on the effort to establish such a national energy authority would almost certainly inhibit continued development of the energy industries.





If the creation of a national authority is impracticable from a constitutional standpoint, its soundness is questionable from an economic and geographical standpoint. Beyond the fact that they serve a similar purpose, the energy industries have practically nothing in common. Coal, petroleum, natural gas, hydro-electric, solar and atomic energy all differ from one another in respect to source, methods of processing, transmission or utilization. As a result, the requisites for successful development and the criteria for the preservation of the national interest vary widely among the different energy industries. Any close study of the peculiarities of these industries indicates that in so far as any regulation is necessary it must be of a highly individualized nature adapted to the particular industry.

This conclusion is reinforced by geographical considerations since the appropriate policy with regard to an industry in one part of Canada may be inappropriate to the same industry in another area.

A further complication lies in the changing nature of the energy industries themselves. Within the past few decades we have seen the virtual disappearance of firewood and the draft animal as energy sources. Within the next three decades we will almost certainly see the rise of atomic energy sources.





The variety and complexity of the energy industries raise not only the question of a national energy authority but the extent to which regulatory action can in fact be effectively taken. In a recent issue of the Harvard Business Review, Professor Otto Eckstein commented as follows on the conflict between those who desire more and those who desire less regulation:

. . . the familiar conflict has taken on a new character today. Superimposed on the philosophical differences is a layer of doubt about the validity of some of the techniques of regulation themselves; many of them seemed to serve their purpose for a number of years but now may have become outmoded.

"This drift to obsolescence of once-appropriate approaches is especially serious in the case of industries being brought under public control for the first time. The dead hand of systems designed for other days and other conditions is being imposed on such industries automatically; government officials apparently are unaware that times have changed since the laws were first drawn. Furthermore, they fail to recognize that different businesses do have different needs and problems and that consequently regulations







have to be carefully shaped if they are to be workable. Mechanical application of the same technique to every kind of enterprise will not produce sound economic results."

Over and above these questions as to the feasibility of the extension of authority over petroleum we would raise the question of the extent to which any need has been demonstrated for such an extension.

In the preamble to this brief, we expressed our feeling that the national interest in regard to energy lay in the fulfillment of four objectives. These were:

1. That there be a high level of energy utilization by Canadians.

2. That there be large reserves of energy sources at the disposal of the Canadian economy.

3. That there be in existence markets which would provide reasonable economic stimulus to the growth of the energy industries.

4. That there should be continuing development of energy resources in line with markets available to provide not only the energy required but for the stimulus such activity gives to the economic development of the country.

None of these objectives we feel could be furthered by the establishment of a national energy





authority, and some would actually be hindered.

On the first point, the fact that Canadians are the second highest per capita users of energy would indicate little need for regulatory action in this regard. The achievement of so high a level of energy utilization in a country which faces the transportation and climatic problems peculiar to Canada is evidence of a singularly high level of service and efficiency by the energy industries in Canada.

In our high energy consuming economy, the prairie farmers are highest consumers as a group. To them the advantages of nearby low-cost sources of crude and products are of great benefit. But the major consuming area in Canada is in Ontario and Quebec, accounting for some 50 per cent of total national demand and a much higher percentage of the industrial demand for petroleum energy. In much of this area, high levels of consumption have been achieved because economical and flexible supplies have been available by tanker from South America, the U.S. Gulf, the U.S. Mid-Continent or the Middle East. For this highly important area of the Canadian economy, maintenance of a high level of consumption is equivalent to maintenance of much of Canada's industry. National policy must give due weight to the need for maintaining flexibility of supply for this major





consuming area, since the freezing of its supply sources could only be carried out at grave risk to the level of energy consumption and hence economic activity.

With regard to the second point of national interest, reserves of energy resources, Canada is also singularly fortunate. As pointed out above, this nation has 0.6 per cent of the world's population, 15 per cent of its energy resources. With the very adequate energy resources on hand, there is little apparent need for the exercise of authority in this respect.

With regard to the third point, the need for markets which will stimulate resource development, we see very little ground for believing that a government can create markets, and any functions which the federal government can perform in this field are of a type which should be exercised by Parliament having regard to the possible effects of such actions. As pointed out in a previous section, this might only be achieved at the risk of either immediate or ultimate loss of other markets and at the expense of the consumer. In any event, it does not require the machinery of a national energy authority to achieve whatever may be possible in this regard.

With regard to the fourth point, the maintenance of resource development activity in Canada







is dependent on the availability of markets and the developer's belief in his ability to supply those markets at a profit. There seems to be little that federal legislation or a nationally constituted energy authority could achieve in regard to either of these functions.

In short, the positive aspects of a national energy policy are either in the hands of nature in the form of natural resources or rely upon the ingenuity of buyers and sellers to bring about a high level of energy utilization which is the basis for market development at home and abroad. The negative aspect of a national energy policy, as suggested by some, consists of restriction on imports, an action for which machinery already exists without the creation of a national energy authority.

Need for Co-ordination and  
Exchange of Information

For the above reasons, we feel that a national energy authority would not further the achievement of those goals which we believe constitute the national interest in regard to energy. In fact, we feel that a national energy authority would actually impede progress. At the same time, we feel that there is need for a greater exchange of information and viewpoints in order to co-ordinate the existing municipal, provincial and federal





authorities which operate in respect to energy. We have already pointed out the conflict in jurisdiction in regard to provincial and interprovincial pipe lines. In the federal field, through the Combines Act and Criminal Code, every effort is made to maximize competition within industry. As we have pointed out in regard to crude oil producing, the system of land tenure in western Canada also acts to maximize competitive efforts in exploration and development. Yet in certain Canadian municipalities, we find restrictions on marketing outlets which are in direct opposition to the competitive principles applied by federal and provincial governments. One sees certain provinces encouraging the conservation of resources by strict regulatory measures, while at the same time we find other provinces discouraging the thrifty use of petroleum energy by imposing prohibitive taxes on diesel fuel. The co-ordination of policies at all levels of government, which can be achieved through a better exchange of information would be definitely beneficial in our opinion.

We believe there exists in the Department of Trade and Commerce a vehicle that could effect this co-ordination and at the same time be used by the Federal Government to carry out such policies as seem appropriate.

Now, Mr. Chairman, will you permit me to





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go to the Conclusions?

THE CHAIRMAN: Oh, yes. I was thinking of Appendix D, Mr. White, but I do not think there is any reason to read Appendix D into the record. Please go ahead with your summary and conclusions.







MR. WHITE: SUMMARY AND CONCLUSIONS.

In this submission we have endeavored to assess the basic operating considerations of the Canadian oil industry in relation to the national interest as expressed in the Commission's terms of reference.

Two points that should be kept in mind in considering the summary and recommendations are given below:

1. No precise limits can be established for any particular segment of the energy field as rapid technical change evolves new forms, new uses and hence large-scale displacements between sources of energy. The utilization of energy resources cannot therefore be blueprinted exactly. Limitations on the normal development and movement of energy to consuming areas can affect the whole structure of existing industrial investment.

2. The oil industry is a high capital consumer in all its phases, including exploration, production, refining, transportation and marketing. The supply of equity funds and the ability of the industry to retain the investor's confidence are essential.

With these in mind, Imperial's views in regard to items of the Commission's terms of reference are as follows:

- (a) the policies which will best serve the





national interest in relation to the export of energy and sources of energy from Canada

It is clear to us that the oil and gas industries, partly because of their location and partly because of the relatively small Canadian population, will require export markets if they are to develop in a healthy manner. Testimony before the Commission has indicated reasonable agreement on the amount of proven reserves of oil and gas. Worldwide experience has shown that proven reserves will be low in relation to the ultimate total reserves. Imperial believes that possible ultimate reserves of both oil and gas in Canada are very large.

The general opinion of industry as to the existence of such large possible reserves should be considered by the Commission in weighing the question of not only permitting but seeking export markets. It is recommended that a policy be established that Canada welcomes the opportunity to export gas and oil and that only under unusual circumstances will permission for such export be withheld under existing legislation.

(b) the problems involved in, and the policies which ought to be applied to the regulation of the transmission of oil and gas between provinces...

In the general field of oil and gas transmission, provincial and federal regulations seem to have been established on a "general carrier" concept





without recognizing the specialized nature of these facilities. Specifically, Imperial suggests:

1. Oil and gas pipe lines represent two distinct functions requiring different policies and degrees of regulation. The oil pipe line, as distinct from the gas line, is a facility of the industry and does not have a monopoly on the supply of a commodity. Unlike gas lines, which buy and sell under long-term contracts, oil pipe lines are carriers only and subject to the many risks associated with the constant shifting of the flexible petroleum supply pattern.

2. The exclusive permit system as presently required by the Board of Transport Commissioners is not necessary in the case of oil pipe lines where competition between projects and between sources of supply together with securities legislation provide the best protection to the public and to the investor.

3. There is need for simplification of present procedures and for clarification of jurisdiction of the federal Pipe Lines Act in order to:

- (i) eliminate jurisdictional conflict with the provinces;
- (ii) reduce the time element in processing applications.

4. It is suggested that authority can be delegated to the Board of Transport Commissioners to grant permits for oil pipe line projects so long as they meet certain physical tests as to safety and







public nuisance. Imperial does not object to the retention in the hands of government of the power to control rates and tariffs, but suggests that, as in the past, the competition between projects and the test of the marketplace will make it unnecessary and unwise to exercise this particular power.

(c) the extent of authority that might best be conferred on a National Energy Board , . . .

Imperial does not believe that there is any practical basis for a National Energy Board in the sense of an energy authority, for reasons outlined in Section VIII.

It appears to us that flexibility in national policy is essential in order to recognize changing conditions, geographical considerations, etc. However, there is need for a continuing co-ordination of information between various levels of government which might well be handled by the Department of Trade and Commerce. At the same time, the Department could act as liaison between the federal government and provincial governments and industry, thus ensuring a continuous up-to-date picture of industry conditions as a guide to government policy. The opportunity to review the overall situation from time to time before commissions such as this also seems desirable.

(d) whether, in view of its





special relationship to the Northern Ontario Pipeline Crown Corporation and the nature of its financing and control, any special measures need be taken in relation to Trans-Canada Pipe Lines, Limited in order to safeguard the interests of Canadian producers or consumers of gas;

Imperial has no comment to make on this item in this submission.

THE CHAIRMAN: I am disappointed; I thought we might get some assistance.

MR. WHITE: I have no comment to make.

(e) such other related matters ...

A principal part of this submission concerns the matter of markets for western Canada crude oil which has come under discussion due to the recent decline in crude outlet. Imperial, historically the largest single individual explorer in western Canada, with a high proportion of shut-in production, is naturally concerned with market development. The views expressed in this submission reflect our continuing assessment of market possibilities and also our actions over a period of years, during which we have undertaken very large financial obligations to expand the crude oil market and in the process successively displaced large crude oil purchases from affiliated companies. We have reluctantly come to the conclusion that the present marketing limits for Canadian





crude cannot be economically extended further eastward by direct delivery. Should such an extension take place artificially, we believe the move would carry grave risk to the long-term well-being of the industry.

Our views and suggestions as to crude oil production and markets can be summarized as follows:

A. The Canadian producing industry has experienced phenomenal growth since the Leduc discovery in 1947 and has extended its marketing perimeter by:

1. Heavy financial commitments assumed by certain companies in major transportation and refining facilities.

2. Substantial price concessions which now leave wellhead prices of Canadian crude 30-45 cents per barrel less than comparable U.S. or Venezuelan crudes.

B. Along with most other industries, Canadian crude oil production is currently showing a marked decline from previous high levels. In addition to the effect of the general economic recession, present domestic and export markets reflect an unusual combination of adverse factors, including warmer-than-normal weather, general world over-supply, adjustment of excess inventory position, and seasonal refinery maintenance shut-downs. Under







these conditions, surplus capacity, which usually represents normal flexibility of supply, has for the present become excessive.

C.           The longer term prospects for the industry are bright. Normal economic markets will grow substantially with expanding economies and growing population. We believe that in view of the obvious need to supplement United States crude supplies, artificial trade barriers will not in the long run limit export markets.

D.           The problem, therefore, is that of bridging the gap between the immediate difficult position and the future in such a way as to preserve the necessary exploration incentive. The necessary risk capital to maintain exploration activity cannot be attracted by crude oil market volume alone, but requires as well reasonable price expectations. The Canadian producing industry cannot tolerate much further reduction in crude price relative to other areas without jeopardizing the flow of capital, bearing in mind that cost/price relationships will inevitably narrow as more remote areas are tapped.

E.           The history of development of markets for Canadian crude has clearly shown that the great overland distance from western Canadian fields to markets represents the big problem in meeting competition. From an economic standpoint, the most attractive markets for Canadian crude lie in the





interior North American markets, where competition is from U.S. crude; and when competing with Venezuelan and Middle East crudes, the nearer seaboard markets of the west coast are preferable to the more distant eastern seaboard.

F. The Montreal market, which could offer the largest potential new volume, involves major permanent pipe line commitments and other serious long-term disadvantages which in our opinion outweigh the volume advantage for the following reasons:

1. If considered on a competitive basis, Canadian crude oil at present prices would be laid down at Montreal at a disadvantage versus imported crudes. Furthermore, this disadvantage may be expected to increase during the life of a pipe line because of the inherent cost advantage of imported crude. Since neither the producers nor the refiners could be expected to make open-end, inflexible commitments under these circumstances, it is difficult to see how a pipe line could be financed as a commercial venture.

2. If considered on the basis of the government giving full guarantees of whatever protection may be required now or in the future, the results would appear to be:

- (i) higher costs to be met by the consumer or taxpayer;

- (ii) a complex permanent system of protection





leading to an increasingly high degree of government control and jeopardy to the future freedom of industry action and flow of new investment capital into the industry.'

G. We believe the first objective to expand the use of Canadian crude in existing markets, where because of better economics and flexibility, the problems involved are appreciably less than in the case of Montreal. The first of these markets is Ontario, where action on the part of individual refiners and marketers could provide increased outlet for Canadian crude. The second market, where a higher degree of saturation should soon become possible, even under U.S. import quotas, is in the Puget Sound area, as the industry's high inventory position is liquidated and normal demand growth resumes.

H. It is believed that, along with recovery from the business recession, successful expansion of Canadian crude sales in the Ontario and Puget Sound markets could preserve the necessary exploration incentive.

I. The most effective immediate steps which the federal government might take to assist the production and market sectors of the oil industry are:

1. Revise depletion regulations to a basis not less favorable than that enjoyed by producers of competitive foreign crude. In all markets,







Canadian crude faces competition having an advantage equivalent to the favorable U.S. depletion treatment. The current Canadian depletion allowance penalizes rather than encourages the primary explorer. The depletion problem has been presented to the federal government regularly for a number of years by the Canadian Petroleum Association and by individual company spokesmen, and complete information on this matter is available to the federal tax authorities.

2. Make continued representation to the U.S. government on the application of import quotas to Canadian oil, particularly after a decision is reached on the extension of the Reciprocal Trade Act. Such representation should be made at the highest level with full attention to the future rather than the current position.

THE CHAIRMAN: I do wish to thank you for your opening statement; I will thank you for your brief when we have completed it. Returning to your opening statement, we do not propose to examine you on it but we do hope the statement will receive wide publicity in the Canadian press. Obviously, what you suggest is beyond the terms of reference of: this Commission but it is a very important matter in Canada, as a whole, and not merely the energy resources of the country. I am very grateful that you made such a statement





publicly here today, sir. Mr. Pattillo?

MR. PATTILLO: Thank you, Mr. Chairman. Mr. White, I will ask you the questions and would you answer them yourself or direct them to anybody you wish to answer them. I would like, first of all, for you to tell us what you know of the operations of Standard Oil of New Jersey either directly or through subsidiaries or affiliated companies in, first, Venezuela?

MR. WHITE: Most of this is a matter of public record and I cannot guarantee to give you the exact figures on any particular phase of the operations. To my knowledge, they are the major shareholders in the petroleum production and refinery in the Creole organization. They produce fuel, refine it, carry on a general petroleum business based mostly on production and/or refined products.

MR. PATTILLO: In addition to Creole, what about International Petroleum in Venezuela?

MR. WHITE: International Petroleum -- there is a technicality there -- does not operate in Venezuela but it does own 25% of Mene Grande.

MR. PATTILLO: As a result of that 25%, does it have available today for sale, crude oil production?

MR. WHITE: Yes, it does.

MR. PATTILLO: What about the Middle East? What are Standard's operations in the Middle East





as carried on for them by subsidiaries or affiliated companies?

MR. WHITE: First, the Standard operation in that was 11 3/4 percent of Iraq Petroleum. That came about just after the First World War. I guess it was Turkish Petroleum that was divided up between the Allies. That carried on for a while until just after the close of the Second World War when the Standard Oil Company New Jersey bought, I believe, 1/3 or 30 percent in Aramco.

MR. PATTILLO: Do you happen to know who the other shareholders are in Aramco?

MR. WHITE: Standard of California, The Texas Company -- both, I believe, with 30 percent. A remaining 10 percent Socony Mobil Oil Company. Finally, there is a very complicated set-up that exists in Iran -- Standard Oil New Jersey has a small interest in Consortium in Iran.

MR. PATTILLO: Now, coming to Standard Oil, New Jersey, does Standard do any producing operations in the United States?

MR. WHITE: Standard, no, but Standard in the sense of investment companies, yes.

MR. PATTILLO: Where are those companies carrying on producing business in the United States?

MR. WHITE: Carter Oil Company in the Rocky Mountain area; Humble in Texas, Louisiana, New Mexico, and to a much smaller extent, California.







MR. WHITE: I am advised that the area is Illinois, Indiana and Kentucky, and Carter has operations in that area.

MR. PATTILLO: Now, what about the Michigan area? Does Carter or Humble ship into that area?

MR. WHITE: Ship into Michigan?

MR. PATTILLO: Yes.

MR. WHITE: I don't believe so. They do have some exploratory work going on there, but they have no refining or marketing there.

MR. PATTILLO: Now, on the west coast, does Humble supply refineries on the west coast, California or in the State of Washington?

MR. WHITE: I don't know; I don't think so, Mr. Pattillo. Their operation is very small there, and actually no means of getting crude from Texas to California on the normal basis. I don't know what it is; it is very small.

MR. PATTILLO: Where does most of the oil produced by Humble go?

MR. WHITE: I think most of it is refined either by Humble itself or in the past -- I am not quite sure whether today or not some is refined by Esso Standard Oil Company. Certainly in Louisiana, and formerly it used to go up to Bayway. I rather think that movement has been discontinued now.

MR. PATTILLO: Prior to oil being taken





from Alberta to Sarnia, what was the source of the crude that Imperial was using in Sarnia?

MR. WHITE: Latterly it came from two sources. Originally it was entirely the mid-continent area, generally speaking, and latterly supplemented by Illinois. Latterly we were bringing about 20,000 barrels of our own crude there.

MR. PATTILLO: When you are talking about this mid-continent and Illinois oil, was that coming from a subsidiary or an affiliate of Standard?

MR. WHITE: That was purchased from Carter. That was 100 per cent from Sarnia.

MR. PATTILLO: Now, where is Imperial obtaining the oil which it is presently using in the Halifax refinery?

MR. WHITE: It is, I think, entirely Venezuelan; certainly largely Venezuelan, and I believe almost all, if not entirely all, purchased from Creole Petroleum Corporation.

MR. PATTILLO: And is that under long-term contract?

MR. WHITE: No contract exists, if that is what you mean.

MR. PATTILLO: What I am going to refer to is the statement you made in your brief that, prior to the sale by Imperial of its interest in International Petroleum, provisions were made so that you were assured of future supplies.





MR. WHITE: We have an assurance, we have a letter. It might be a contract; it has never been formalized, and we have never had any trouble.

MR. PATTILLO: Has there been anything said about the period of time that it might exist?

MR. WHITE: Twenty years was the period set forth in the letter.

MR. PATTILLO: Twenty years from when?

MR. WHITE: The sale of International Petroleum which, if I remember correctly, was 1948. Therefore there are ten years to run of the contract.

MR. PATTILLO: Is there anything in this letter as to the quantities?

MR. WHITE: Yes -- far in excess of what we need. I might explain that at that time we didn't have any Trans Mountain Pipe Line, and the Vancouver requirements were added into the total, and as a result we are amply covered for whatever we want.

MR. PATTILLO: You mean by "amply covered" that you won't want, but what I am trying to find out is whether you are obligated to take your supplies from Montreal and Halifax?

MR. WHITE: In discussing this particular problem we have given no weight to the contractual obligation to buy oil from Creole. That doesn't sound very good, does it?







MR. PATTILLO: In any event, you don't want the Commission ---

MR. WHITE: We don't want you to feel that there is any influence of a contract with Creole in the obligation, because no such contract exists.

MR. PATTILLO: Are all the supplies required by Montreal all crude coming over the Montreal pipe line?

MR. WHITE: Yes, generally. There might be an occasional car comes around, but that would be an exception.

MR. PATTILLO: Is it all Venezuelan oil?

MR. WHITE: We have run other crudes in the past but I would say Venezuela is the source of supply for the Montreal refinery.

MR. PATTILLO: What is the capacity of the Montreal refinery?

MR. WHITE: Well, it is either 69,000 or 70,000 barrels per day.

MR. PATTILLO: And the Halifax refinery?

MR. WHITE: Forty-five thousand barrels per day.

MR. PATTILLO: Are both those refineries operating at full capacity?

MR. WHITE: No. I would say Montreal is approximately full capacity; Halifax might be about two-thirds. Well, in 1958 Montreal was scheduled to run at full capacity, Halifax





scheduled to run at 80 per cent.

MR. PATTILLO: Now, how is this oil taken to Halifax from Venezuela?

MR. WHITE: I am sorry, could you have that read again?

MR. PATTILLO: How is the oil taken to Halifax from Venezuela?

MR. WHITE: By tanker.

MR. PATTILLO: Who owns the tankers? Is it Imperial?

MR. WHITE: Well, a variety of people own them. We own three ocean vessels at the present time. We have two on long-term charter and a number of spot charters that we pick up whenever we need them.

MR. PATTILLO: Those that are under long-term charter, are they owned by Standard or an affiliate of Standard?

MR. WHITE: I know one is not. Two long-term charters are from non-affiliated companies.

MR. PATTILLO: How long do those charters run?

MR. WHITE: Originally ten years.

MR. PATTILLO: And they began when?

MR. WHITE: Two ships expire at different times; one goes out, off charter, in 1960, and one in 1962.

MR. PATTILLO: Are these same tankers





transporting the oil from Venezuela to Portland or  
is there a different group of tankers for that run?

MR. WHITE: The same group.

MR. PATTILLO: And what do you say are your  
transportation costs of transporting oil from  
Venezuela to Halifax per barrel?

MR. WHITE: I am informed the statement  
is being typed and it will be here in a few minutes.  
Could you defer that one?

MR. PATTILLO: And the same statement is  
going to bring me information as to Venezuela and  
Portland?

MR. WHITE: I am sure it, practically  
speaking, will.

MR. PATTILLO: Now, this pipe line of  
which the Shell Oil Company spoke to us, the Port-  
land/Montreal pipe line, Imperial has an interest in  
that?

MR. WHITE: Yes, 36 per cent.

MR. PATTILLO: And what do you say as to  
the figures that were given to us by Shell as to  
the tariffs on that line, 6 cents for the U.S.  
portion, 3 cents for the Canadian portion?

MR. WHITE: I have no reason to quarrel  
with them; they sound right.

MR. PATTILLO: Have you any difference  
in your loading costs or are they charged by the  
pipe line company?







MR. WHITE: Do you mean unloading of ships at Portland?

MR. PATTILLO: Yes.

MR. WHITE: They are handled by the pipe line company.

MR. PATTILLO: So the costs would be the same?

MR. WHITE: Identical.

MR. PATTILLO: I would like to get some information as to the importation of products. In barrels per day, what quantity of products is being imported through the Maritime Provinces, including Newfoundland?

MR. WHITE: What year do you want, Mr. Pattillo?

MR. PATTILLO: Well, I think probably ---

MR. WHITE: 1953 to 1957. 1957, 41,000 barrels, products 20,000 barrels daily; 1956, 21,000; 1955, 27,000; 1954, 20,000 barrels, and 1953, 15,000 barrels.

MR. PATTILLO: What is the source of these products, where are they coming from?

MR. WHITE: These are industry figures. I would guess most of them come from the Caribbean area. I don't know where they get the material.

MR. PATTILLO: Do you people import into the Maritimes or Newfoundland?





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MR. WHITE: Yes.

MR. PATTILLO: Where do you get yours from?

MR. WHITE: Basically the Caribbean area; sometimes the U.S. Gulf.

MR. PATTILLO: And are those products obtained from Standard or a company associated with Standard?

MR. WHITE: Generally speaking, yes.

MR. PATTILLO: We will come to the Province of Quebec. What is the situation there regarding the products?

MR. WHITE: Industry figures again, going backwards: 1957, 28,000; 1956, 28,000; 1955, 31,000; 1954, 24,000, and 1953, 18,000 barrels. All these are barrels per day.

MR. PATTILLO: Is Imperial importing any products into the Province of Quebec?

MR. WHITE: Yes, we are importing furnace oils.

MR. PATTILLO: Where are you getting them, where are they coming from?

MR. WHITE: Generally speaking, I would say from the Caribbean area or the U.S. Gulf.





MR. PATTILLO: Or from Standard or one of its affiliates?

MR. WHITE: Generally speaking, yes. There are exceptions to both those statements.

MR. PATTILLO: I suppose you mean, by exceptions, if it was not convenient for one of the affiliated companies to supply, then you would buy on the open market?

MR. WHITE: Or if the price was completely wrong, we would buy on the open market, too. We have done that, believe it or not.

MR. PATTILLO: What about the Province of Ontario and the importation of products?

MR. WHITE: Would you like the figures, again?

MR. PATTILLO: Please.

MR. WHITE: In 1957, again, 23,000 barrels daily; in 1956, 25,000 barrels daily; in 1955, 22,000 barrels daily; in 1954, 24,000 barrels daily and in 1953, 26,000 barrels daily.

MR. PATTILLO: And has Imperial been importing any portion of that?

MR. WHITE: Yes, we have been importing some heating oil but, particularly, aviation gasoline.

MR. PATTILLO: Where are you getting that?

MR. WHITE: Toledo, Standard of Ohio, I believe. I should point out, for the record, that







that is not associated with Standard of New Jersey in any way.

MR. PATTILLO: What about the Prairie Provinces? What is the product situation there, in the industry?

MR. WHITE: Very, very little, Mr. Pattillo, with all this special stuff. For example, last year, in Maritoba, we imported 2,000 barrels a day -- the industry, rather. In Saskatchewan, 1,000 barrels a day and in Alberta, 1,000 barrels a day. That is peanuts.

MR. PATTILLO: What about B. C.?

MR. WHITE: B. C., industry, again: in 1957, 14,000 barrels a day; in 1956, 16,000 barrels a day; in 1955, 14,000 barrels a day; in 1954, 16,000 barrels a day and in 1953, 26,000 barrels a day.

MR. PATTILLO: Now, Mr. White, since the market for Canadian crude began to fluff off, have you or anybody in your company given any consideration to whether or not imports coming into Canada for the industry might be curtailed in any way to assist Canadian crude sales?

MR. WHITE: That is the basis, I think, of this intermediate case, in part, Mr. Pattillo. Yes, we have been giving consideration to that.

MR. PATTILLO: Have you given any consideration to trading with Standard or its associated





companies, crude for products that you were bringing from them, trading crude into the United States?

MR. WHITE: Frankly, logistically speaking, that would not be at all helpful. If you are going to do that, you might as well buy their products and sell them crude. Standard does not happen to be in an area where they would need, want or be able to use Canadian crude.

MR. PATTILLO: Carter is not, either?

MR. WHITE: No.

MR. PATTILLO: Humble is not in an area where it can use Canadian crude?

MR. WHITE: Definitely not.

MR. PATTILLO: Have you inquired into what has been the policy of Carter or Humble or Standard in the United States as to the quota restrictions on foreign oil, including Canadian oil, going into the States?

MR. WHITE: Well, I don't think it needs much inquiring into to be able to say, without knowledge, but to say that Humble has always been very conscious of the U. S. producers' position and does not like imports. I think I might say the same thing about Carter, but they are in a little different position, being inland more. I would think they would both behave quite naturally and be 'agin' imports.

MR. PATTILLO: So you would expect them





to be down in Washington, beating the drum, along with the other boys?

MR. WHITE: I don't think you have to go to Washington to beat the drum.

MR. PATTILLO: May I find out about this products line between Montreal and Toronto. Has Imperial any interest in that line?

MR. WHITE: No, we have not.

MR. PATTILLO: Does Imperial ship any products over it?

MR. WHITE: No, we do not.

MR. PATTILLO: Does Imperial bring any of the products which it refines in the Montreal refinery into the Province of Ontario?

MR. WHITE: Yes, into the Ottawa Valley area.

MR. PATTILLO: Do you do that by tanker or rail?

MR. WHITE: It is normally done by rail, or truck. We had tankers at one stage.

MR. PATTILLO: Has Imperial any tankers at the present time which it owns or any subsidiary of it owns on the Great Lakes?

MR. WHITE: I think we have about ten. I find we have thirteen of that type of ship. Two happen to be operating coastwise in the Maritimes and the balance of eleven are working on the Great Lakes.







MR. PATTILLO: Could these tankers sail through the St. Lawrence, at the present time?

MR. WHITE: Of those on the Great Lakes, all but one.

MR. PATTILLO: Can?

MR. WHITE: Yes. The newest one was built having in mind the St. Lawrence seaway.

MR. PATTILLO: It will be able to when the seaway comes in?

MR. WHITE: The others can, in present channels.

MR. PATTILLO: What is the capacity of these eleven tankers? How much oil can they move?

MR. WHITE: Each of them is about 20,000 or 22,000 barrels capacity. Multiplied by 11, you have 200,000 barrels, all at once, but that is not a daily capacity figure, obviously.

MR. PATTILLO: I was going to ask you: How long does it take a tanker to load and go to Montreal from Port Credit?

MR. WHITE: I would not have any idea. I can find out for you, though.

MR. PATTILLO: Right.

MR. WHITE: I think, if you don't mind, we would rather have that figure correct.

MR. PATTILLO: I would also like to know how long it would take from Superior to Montreal and from Sarnia to Montreal.





MR. WHITE: In this size and class of ship, approximatey seven to nine knots range, or six to eight, we will give you the information on that basis.

MR. PATTILLO: Do you know what it would cost, per barrel, to move crude from Port Credit to Montreal, by tanker?

MR. WHITE: In this size of tanker, we would have to get an estimate made. It is not anything that anybody is doing, I don't believe, or, if they are, I am not aware of it.

MR. PATTILLO: Well, if you would get me the approximate figures, from the three places I have mentioned to Montreal.

Now, what about other tankers on the lakes, not owned by Imperial? Are there a large number of tankers which would be available for the carrying of crude oil on the Great Lakes or the St. Lawrence River?

MR. WHITE: I don't believe so. In fact, the tankers we are talking about are all intended for hauling refined products. If you wish to do it for one product, you have to take it away from the others. I would say there are no surplus ships of any consequence that could be made available for this service without disrupting the other products.

MR. PATTILLO: What do you use tankers





for at the present time? Do you use them to supplement your products pipe line from Sarnia to Toronto?

MR. WHITE: Well, it could be used for that but, more particularly, they would be for going up the northern coast of Lake Huron, Georgian Bay, Superior and down the St. Lawrence, too. They are in different services.

MR. PATTILLO: Has any consideration been given by Imperial Oil or any other company that you know of to make an agreement between the refiners in the Montreal area and the refiners in the Toronto area, whereby the products presently being shipped from Montreal into Ontario would cease and the Toronto refiners would make arrangements to supply whatever was required for the purposes of these companies now dependent upon the Montreal refineries?

MR. WHITE: Well, Mr. Pattillo, that is a sort of thorny question. I don't know how you start that sort of operation, really. I think it will come from individual initiative, possibly sparked by the hearings of this Commission; but I don't think any one company would like to call the industry together and say, "Let us shut down capacity at one place or another place."

I don't think that would sit very well with Mr. McDonald.







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MR. PATTILLO: Would you like him to do it?

MR. WHITE: There is a problem there, Mr. Pattillo, that we are giving some thought to, and I am sorry I do not have the answer as to how to go about it, right now.

MR. PATTILLO: You do agree it is something that should be worked out?

MR. WHITE: Once again, that is one of the bases of the intermediate case we have in our submission here.

MR. PATTILLO: Can you help me regarding the refineries that are in reasonable proximity to the Interprovincial Pipe Line and are in the United States, as to their capacities, who owns them and who their suppliers are, if you know that?

MR. WHITE: In the Interprovincial pipe line, let us start with Toledo. There are four plants there, the Gulf Oil and Refining Company, listed at 42,000 barrels. Incidentally, this is published material.

Then there is the Pure Oil Company Refinery, 38,400 barrels daily and Standard of Ohio at 23,000 barrels and Sun Oil Company, 95,000.

MR. PATTILLO: The Sun Oil Company at 95,000? Is that the same Sun Oil that has the refinery in Sarnia?

MR. WHITE: I am sure it is. That seems





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to be a very -- let us check that figure.

Well, we will proceed into Detroit.

MR. PATTILLO: What is the refinery picture there?

MR. WHITE: There are two refineries there, the Aurora -- I do not know what the rest of that name is, but it is the Aurora Refinery, 44,000 barrels a day, and Sunoco Mobil, 29,500.

MR. PATTILLO: Would you proceed and give us any others?

MR. WHITE: May I confirm that the Sun Oil capacity is listed at 95,000 barrels in this publication, the Oil and Gas Journal of March 4, 1958.

MR. PATTILLO: Have you any indication in the publication you have before you indicating the source of supply they have for their crude?

MR. WHITE: I am afraid not.

MR. PATTILLO: Do you, or does anybody in your organization, happen to know it, of your own knowledge?

MR. WHITE: Only by inference and so on. I am quite sure that the Sun refinery is supplied by the Mid-Valley Pipe Line from the Gulf Coast area, although I do not know that except that it has to be.

MR. PATTILLO: That is the same pipe line that comes up to the Sun refinery at Sarnia?

MR. WHITE: Not exactly. There is another pipe line connection in there.





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MR. PATTILLO: And is that pipeline owned by the Sun Oil Company?

MR. WHITE: Are you referring to Mid Valley?

MR. PATTILLO: Yes.

MR. WHITE: No, it is partially owned by Sun Oil.

MR. PATTILLO: Partially?

MR. WHITE: I do not know what their interest is

MR. PATTILLO: You told us about the Detroit area; have you got a refinery capacity?

MR. WHITE: I have Chicago here and that is about it.

MR. PATTILLO: Give us Chicago.

MR. WHITE: It is quite large; 414,000 barrels a day. Do you want the names?

MR. PATTILLO: Yes.

MR. WHITE: Cities Service has 53,000 barrels a day; Sinclair has 111,000 barrels a day and Standard of Indiana has 215,000 barrels a day and Mobil has 35,000. That gives the 414,000 barrels a day.

MR. PATTILLO: Is Standard of Indiana in any way associated with Standard of New Jersey?

MR. WHITE: Standard of Indiana is not related to Standard Oil New Jersey in any way.

MR. PATTILLO: And Mobil has a refinery in Chicago.

MR. WHITE: Yes.

MR. PATTILLO: Now, Mr. White, am I correct







in thinking that Mobil is carrying on as a producer in the Province of Alberta?

MR. WHITE: Yes, sir.

MR. PATTILLO: And what about Sinclair?

MR. WHITE: Yes, they are operating as producers.

MR. PATTILLO: What about Cities Service?

MR. WHITE: Yes.

MR. PATTILLO: And is Cities Service also building a refinery in the Toronto area?

MR. WHITE: They are.

MR. PATTILLO: Now, since the Canadian market for crude flopped off, have you or has anybody in Imperial Oil approached any of these four companies in the Chicago area to see whether or not any arrangements could be made for them to take some Canadian crude?

MR. WHITE: No, we have not, Mr. Pattillo, not recently. We have not got a pipeline into Chicago.

MR. PATTILLO: How long a line would have to be built through Interprovincial into Chicago, if you could get them to take it to Chicago?

MR. WHITE: We would not want to sell crude in Chicago at the price we could receive for it and that is probably the basic reason why we do not have a pipeline.

MR. PATTILLO: Let us come to the Detroit situation; is the Socony Mobil crowd that are in





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Detroit the same people you made this deal with whereby you are exchanging 11,500 barrels a day?

MR. WHITE: I believe so.

MR. PATTILLO: If they would exchange from one place, did you ever try to see if they would exchange in Detroit?

MR. WHITE: Well, the elements of the exchange we would make with them do not exist in Detroit. We were taking Venezuelan crude around Puget Sound. In the case of Detroit, there is no Venezuelan crude.

MR. PATTILLO: But you might, conceivably, be able to make an arrangement that you would take a little more Venezuelan crude from them and they would take Canadian crude in Detroit. In any event, you have not considered it?

MR. WHITE: No, not in that way. We have been in touch with Aurora consistently and often and have not been able to do much with them.

MR. PATTILLO: On the question of price there, am I correct in thinking you should be able to put Canadian crude into Detroit at a competitive price?

MR. WHITE: It would be pretty close to being competitive; we have some figures on that.

MR. PATTILLO: You are not ready to give us those now?

MR. WHITE: Not unless you wish to wait; we will have to look for them. The best we can do, we can promise to give them to you. We do not have them





worked out; possibly, because the pipeline is not connected to Detroit.

MR. PATTILLO: That would only be a 60 mile extension to put it into Detroit.

MR. WHITE: There is no problem there for Standard.

MR. PATTILLO: About Toledo, have you ever approached Gulf, which is the parent company of B.A. Oil as I understand, to see if they would be interested in taking in Canadian oil for the refinery they have in Toledo with a capacity for 42,000 barrels a day?

MR. WHITE: We have not.

MR. PATTILLO: Or Sun?

MR. WHITE: We would give you the same answer on all four Toledo refineries except in the case of Sohio. We have made an approach to Sohio.

MR. PATTILLO: When was that approach made?

MR. COGAN: My most recent discussion on that was sometime last year at which time they indicated they did not feel the price sufficiently competitive to undertake it.

MR. PATTILLO: Did they give you any indication what price they would be interested in?

MR. COGAN: They felt it was a changing situation and, while it was close, they did not feel at the present time they could take it. Frankly, they had not lined up their source of supply and we were attempting to get our Venezuelan in.







MR. PATTILLO: We know that Gulf, through B.A., has large production facilities in Alberta. What about Sun; has Sun got very much out here?

MR. TWAITS: Not too much.

MR. PATTILLO: But they are here in Alberta as a producer. What about Sohio?

MR. TWAITS: They are in Alberta as a producer.

MR. PATTILLO: And this other one, Pure?

MR. TWAITS: Pure also is here in Alberta.

MR. PATTILLO: All of these companies are here with production and would you agree with me, Mr. Cogan, that Canadian crude should be able to be laid down at Toledo in competition with U.S. crude?

MR. COGAN: Our figures would indicate that for Toledo and Detroit there is a difference in the order of 10¢ a barrel if a line were built into the area.

MR. PATTILLO: Would you agree, a much less disadvantage exists than in trying to take Canadian oil into Montreal?

MR. COGAN: Definitely.

MR. PATTILLO: And do you agree, if you could put Canadian oil into Toledo and into Detroit, that the quantities you could put in there would be comparable to the quantities that might go into Montreal under Mr. Brown's scheme?

MR. COGAN: The refining capacity is of the





same order, yes.

MR. PATTILLO: Would you, as a large producer in Alberta, be prepared to make your price competitive in Toledo and Detroit to capture that market rather than go to Montreal?

MR. COGAN: We certainly feel we could do better with our line than in Montreal. As producers, we would expect to net back a better figure. We would expect the price could be established at a higher level for movement into those areas than in Montreal on a competitive situation.

MR. PATTILLO: What I am having difficulty in understanding, if you want to go to Montreal, why haven't you been going around hitting these fellows over the head to make them take their share?

MR. COGAN: We have been selling crude to an extent considered reasonable and we feel there are some problems the rest of the people should look after, too.

MR. PATTILLO: Can you tell me whether the Sun has any producing facilities either directly or through affiliates in Venezuela?

MR. COGAN: I believe that they do have some interest in Venezuela but I could not say for certain.

MR. PATTILLO: What about the Middle East?

MR. COGAN: I am not sure.

MR. PATTILLO: What is Gulf's situation? It is in Venezuela, is it not?





MR. COGAN: Yes.

MR. PATTILLO: It is in that same company that International Petroleum has an interest in, is that right?

MR. COGAN: Yes.

MR. PATTILLO: Do you know anything about Pure and Sohio; are they in Venezuela?

MR. COGAN: I believe that Sohio has some interests in Venezuela; Pure, I do not know.

MR. PATTILLO: And the Middle East, do you know anything as to the operations of Gulf, Pure and Sohio?

MR. COGAN: Gulf are in the Middle East and Sohio, I believe, has a very small interest in the Iranian Consortium.

MR. PATTILLO: What can you tell me about the refineries in the San Francisco Bay area?

MR. WHITE: The only information, again, comes from public sources and are as follows: Shell, 55,000 barrels a day, Standard of California has a refinery, 167,000 barrels a day; the Tidewater refinery at Avon, 107,700 barrels a day making a total of 329,700 barrels a day.

MR. PATTILLO: During the Suez crisis, were any of those refineries buying Canadian crude?

MR. WHITE: I believe they were.

MR. PATTILLO: Do you know which ones?

MR. WHITE: Tidewater and Standard Oil and







Standard of California.

MR. PATTILLO: Am I correct in thinking that Standard of California has recently announced it is going to build a refinery in New Brunswick in association with the Irving interests?

MR. WHITE: Yes.

MR. PATTILLO: And it has large productions in the Province of Alberta; is that right?

MR. WHITE: I believe so.

MR. PATTILLO: What about Tidewater; have they any production in Alberta, directly or indirectly?

MR. WHITE: None at all, I am told, but they do have some in Saskatchewan.

MR. PATTILLO: They have some in Saskatchewan. Have any approaches been made, to your knowledge, to Standard of California or to Tidewater to see whether or not they would be prepared to resume taking Canadian crude in San Francisco Bay?

MR. WHITE: Periodical attempts have been made. I do not believe we feel optimistic about selling them any crude in San Francisco at this time.

MR. PATTILLO: By reduction in the tariff rates on Trans Mountain, Mr. Morrison told me there would be no problem about making Canadian crude competitive in the San Francisco Bay area. Would you agree with that statement of Mr. Morrison's?

MR. WHITE: I think we will have to see if he does reduce his tariff. I will have to check that.





We have some figures here which indicate that Redwater crude in the long run position is just about competitive in San Francisco now that the pipeline tariff quota is 40¢ a barrel and I think that is presently lower than the Trans Mountain tariff.

MR. PATTILLO: No, it has been cut.

MR. WHITE: It is 40¢ a barrel.

MR. PATTILLO: So, it would be competitive if they further cut the tariff another 10¢.

Mr. Cogan or Mr. White, would you agree with me about this: if you were applying solely the natural laws of economics and buying where you could get the cheapest product, Canadian crude could be very much in the picture for the refiners in Detroit, Toledo and San Francisco Bay.

MR. COGAN: I think you would be quite close assuming you had the lines into Detroit and Toledo and the San Francisco area; over a long term period, they probably could. Today San Francisco would not be attractive with the question of the lower tanker rates which can be secured and also the matter of foreign exchange. These things are real considerations in short term factors.





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MR. PATTILLO: Would it be fair to say, from your experience in the business, that -- take Standard of California -- if it wasn't confronted with pro rationing in Alberta it probably would be shipping, if it were dealing solely from the standpoint of economics, Alberta oil to its San Francisco Bay refinery?

MR. COGAN: I don't think it would today. I think it could probably occur in the future.

MR. PATTILLO: I am rather interested in this Sun Oil Company. Am I correct in thinking that Sun Oil is presently importing the greater bulk of its requirements of crude?

MR. COGAN: I believe that is correct.

MR. PATTILLO: And have you ever talked to them about that subject?

MR. COGAN: Yes.

MR. PATTILLO: That isn't an economic thing from their standpoint; your crude is cheaper, is it not, laid down Sarnia than American crude?

MR. COGAN: It should be laid down at the same price. Now, they, of course, have certain facilities which would be rendered valueless if they used all-Canadian crude solely.

MR. PATTILLO: That is looking at it from your own selfish interests.

MR. COGAN: I wouldn't put it that way. I don't think that is quite correct. If you have







an existing facility you don't throw it in the junk heap without having it showing some effect.

MR. PATTILLO: Well, what I really wanted to say is that it is not merely the question of the laid-down price. Whether one is considering whether to buy or not, a refiner has regard to his own investment in plant facilities and pipe line or tankers which might be completely obliterated by using a pipe line of another group.

MR. COGAN: I think you would call it a basic economic consideration. It is uneconomic, obviously, to throw away useful resources and not give some consideration therefor.

MR. PATTILLO: And that is one of the reasons you came up with a laid-down price of 3.34¢ as opposed to Mr. Brown's laid-down price of 3.16.

MR. COGAN: Yes. From a natural economic standpoint of a refiner, it is a consideration that has to be taken into account.

MR. PATTILLO: In other words, you are going to look at your facilities that are presently in existence and you are not going to have regard solely to a laid-down price but you are going to have regard to what it is going to cost you to use that oil.

MR. COGAN: I believe that is natural.

MR. PATTILLO: And that is when you are looking at it from the standpoint of the Standard





organization; I would say that that is probably why you want to continue to use foreign oil in Montreal.

MR. COGAN: No, it is nothing to do with it. We are looking at our own situation.

MR. PATTILLO: Would you agree with me that it is more profitable for the Standard organization to be using Venezuelan oil in Montreal than it would be if Canadian oil was used in Montreal?

MR. COGAN: I think that is probably true, Mr. Pattillo. It depends what virtue you put on expanding a Canadian company, what value you put on it.

MR. PATTILLO: I don't think we will ever finish this subject today, but I am going to come to this basic starting price of oil. Now, as I understand it from the Shell representatives, everything starts with the price in the Gulf laid down at New York or the Gulf laid down in the U.K. Now, do you agree with that?

MR. COGAN: No, I do not.

MR. PATTILLO: Would you please get me off on a new starting base?

MR. WHITE: I would like to read a little piece on pricing into the record; but you agree it is a very complex thing, and in my opinion there are very few people are experts at world prices. Perhaps that is a bad sort of thing to try and





be an expert on. However, here is a study of the American Petroleum Institute published in 1953, entitled: "Oil Prices in Competition", and you might be interested in what the author said about the assignment.

MR. PATTILLO: Who is the author?

MR. WHITE: The author is Mr. Harold Fleming. The publication is dated October 16, 1953. He says: "When the American Petroleum Institute

"asked me to do a summary of how oil prices are  
"arrive at, we thought it might run perhaps  
"5,000 words and take perhaps a month. After two  
"months the first 12,000-word draft was sent out  
"in mimeographed form to companies and firms in  
"the industry for check. Undoubtedly there are  
"a few sentences in this final document that were  
"in the original draft, but I am not sure where  
"they are.

"The second draft of about the same length  
"went out about November. Gradually, as comments  
"came in, suggestions for about 150 textual  
"changes came . . .

"The third draft came out in February, and  
"it brought out 75 more suggestions, and the  
"fourth draft in August, 1952.

"The result embodies the concensus of a  
"host of witnesses in industry about how oil  
"prices are arrived at. Hundreds of oil men







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"in all departments of industry have had a chance  
"to pass on the draft of this brochure, but the  
"story as presented here is mine, with outside  
"writers' views and without change of emphasis".

This just illustrates the complexity in  
endeavouring to describe the system of oil prices.  
I think we can be fairly expert about oil prices in  
Canada; beyond that, I am not sure how expert anyone  
is. The difficulty is that this has been going on  
since the beginning. The competitive forces since  
that time have been gradually changing. The forces  
today are the same as they always were, different  
areas competing with each other.

MR. PATTILLO: Now, what I am trying to get  
at is this. We start off with the US Gulf price. I  
am not interested for the moment in trying to find out  
how that is arrived at, but does that price have an  
effect on the price of crude delivered at Sarnia? It  
does, doesn't it?

MR. WHITE: Yes, I would think so, in this  
sense, that the US Gulf is tied in very closely through  
a pipeline network through the mid-continent which  
brings the Illinois price in close relationship. So  
I would say the answer to that is yes.

MR. PATTILLO: Then we have the price of  
Venezuelan crude which Shell give us and which you  
also mentioned in your brief and you take that into  
Portland, for example. Now, if the price laid down





at Portland of Venezuelan crude in any way based on that Gulf price of US crude?

MR. WHITE: I would say absolutely no.

MR. COGAN: I would say there is a general relationship, but there is no relationship over a period of time. There is a constant shifting and jockeying back and forth. I would say the price laid down at Portland is cheaper than US oil.

MR. PATTILLO: Can you give me any idea of the difference?

MR. COGAN: I can't tell you the different qualifications, but it is dependent on that factor of transportation at any given time.

MR. PATTILLO: Now, as to the Alberta oil, as I understand your brief, Mr. White, you say that at the present time the cost per barrel of oil amounted to in the vicinity of \$1.20, and that you have at present some prices with approximately a 100% mark-up figure to pay income tax and profits and give you money to carry on. Now, is that approximately the picture?

MR. WHITE: I don't like the way you put that, because we don't mark up oil. You are not looking at the period of time over which the oil is produced. There is a margin in there, obviously, because we are still in business.

MR. PATTILLO: What I want to get at is, you say you have got to have a margin to keep up





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incentive, that if you haven't got the margin there will be no incentive. Have you given any study as to what is the break-off margin there? You say:

"All right, if it goes below such and such a mark-up we have lost our incentive, it isn't worthwhile."







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MR. WHITE: That is a matter of judgment entirely, Mr. Pattillo. I think we have pointed out, in that same section from which you are drawing your figures, that the average rate of return is between 7% and 12%. We have not taken it back into terms of crude costs and differential, so I cannot quite understand your question.

MR. PATTILLO: I was going to ask as to whether you had any knowledge of what the rate of return would be for the producer in Texas.

MR. WHITE: I have no knowledge.

MR. PATTILLO: Whether he is getting better than a 7% to 12% return or not.

MR. WHITE: I'm sorry. I can't tell you.

MR. PATTILLO: Am I correct in thinking this: Assuming that the price in the Gulf of oil is partly determined, in the first place -- and that is the thing that everybody starts with and you equate everything to -- that there will come a time when the Canadian producer, if his price goes down substantially, would have to say to himself, "There isn't enough margin here for me to continue to put my money into exploration here. I had better take it and put it somewhere else."

MR. WHITE: I think we could come to that conclusion, if your profit incentive disappears.

MR. PATTILLO: And in considering whether





or not you go to Montreal and make the necessary cut in the price of crude to get there and be competitive, could that situation arise so far as the Canadian producer in Alberta is concerned?

MR. WHITE: I think we can answer that "yes", Mr. Pattillo. Your Montreal complex, though, is not just that one cut. There is a lot more to it than that. However, the answer to your question, I think, is "yes".

MR. PATTILLO: With these costs you have given us, and particularly the lifting costs, the operating costs, would they be reduced per barrel if production went up?

MR. WHITE: In the over-all, I think you could expect a reduction. It varies, of course; but I think the tendency would be --

MR. PATTILLO: To have a reduction?

MR. WHITE: Yes.

MR. PATTILLO: And that accounts, in some measure, for your lifting costs being lower in the early years, when your rate of production was much higher than it presently is, today?

MR. MACKENZIE: Yes.

MR. PATTILLO: That is a very long answer you gave me, Mr. Mackenzie.

MR. MACKENZIE: It was a short question.

MR. PATTILLO: While you have the microphone, Mr. Mackenzie, what are your views on





pro rationing and the necessity of it for the purpose of good conservation practice?

MR. MACKENZIE: Mr. Pattillo, I would like to preface my remarks on pro rationing by a few comments on mineral right administration.

I think, worldwide, there are two systems: first, there is the concession system, with the asserting of the mineral rights owned by the State. An operator acquires exclusive rights to explore and produce any given area, and often it is a fairly large area, for a stated period of time. At the end of the concession period, everything reverts back to the State, and, in this system, the law of capture is an accepted principle.

Now, the other system is the North American system, where the rights are leased on a drill, pay or quit agreement, often on small tracts of land, and, if production is found, the lease is extendable, so long as it is productive.

In the final analysis these extensions are such that the lessee must protect the lessor against drainage from neighbourhood operations. In other words, the law of capture is rejected or at least modified.

Thus ratable taking is an inherent principle in the North American system and, in order to have ratable taking in a highly developed, complex industry, where there are many operations,







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several mineral owners and several purchasers, pro rationing to market demand, in my opinion, becomes a necessity to achieve ratable pay. In other words, it is a conservation measure.

Now, Mr. Pattillo, I think we could discuss this subject at some length, but I would like to pause at that point.

MR. PATTILLO: Do you agree that one of the results of pro rationing is that you have a uniform price system in the area?

MR. MACKENZIE: Mr. Pattillo, Mr. White read some excerpts earlier, and I would like to read one here which I think expresses it very well.

This is a paper by Mr. Hines H. Baker, President of Humble Oil and Refining Company, entitled "Achievements and Unsolved Problems in Oil and Gas Conservation". It was an address delivered before the Spring Meeting of the Southwestern District, American Petroleum Institute, Division of Production, at Galveston, Texas, in March, 1949, and he says:

"A point not usually understood is that production  
"normally is restricted not to market demand but  
"to the maximum efficient producing rate of  
"each field. It is only when the aggregate  
efficient producing capacity of all the fields  
"exceeds the total market demand that it becomes  
"necessary to reduce the allowed production





"below the efficient capacity. Thus, proration  
"is basically not a system of balancing  
"production with demand but of regulating pro-  
"duction to prevent waste, and of balancing it  
"with demand only when such balance is required  
"to protect correlative rights and assure  
"ratable takings, in order that other regula-  
"tions designed to prevent waste may be effect-  
"ively carried out.

"No claim is made that regulation of  
"production to market demand is without influence  
"on price. But such restriction is not a price-  
"fixing program and does not result in price  
"fixing."

MR. PATTILLO: Well, does that not result  
in this: for example, Imperial Oil, as a refiner  
in Sarnia, nominates how much oil it wants from  
its Sarnia refinery for the coming month. As a  
producer, Imperial is only permitted to supply  
from its own wells a certain proportion of that  
nomination and it has to buy, from the other  
producers in Alberta, the rest of its requirements.  
Is that not so?

MR. MACKENZIE: That is correct.





MR. PATTILLO: And does that not mean that the posted price, on that system, is the real price?

MR. MACKENZIE: That is correct.

MR. PATTILLO: And, accordingly, when you are in competition, where you are buying in a pro ration field and are in competition with another person who is buying or supplying his own requirements, you can not compete at all, can you?

MR. WHITE: Well, Mr. Pattillo, we have gone on record as saying that we need this system to keep the share of the industry as it is at the present time. This is man's ingenuity in solving a problem. Now, in solving the problem, there are some things that come with it. It is perfectly obvious that if anyone has a one percent interest in the field and has to buy 99 barrels out of every 100, that he cannot have an economic incentive to go out and peddle that at the usual competitive cut price now.

Now, you are saying, "Does this, in effect, mean does the pro rationing cut down the incentive to sell," and certainly, in the example I have given, it does.

Now, where the percentage interest reaches a point where you can say there is incentive, I don't know. I am perfectly sure that the industry is maintaining the incentive to look for and develop markets for crude oil.







MR. PATTILLO: Mr. White, do you agree with me that as long as you have the Texans using pro rationing and as long as you have the Texas price controlled by a price in Sarnia, just as long as Alberta is on pro rationing, you have companies in Alberta, vis-a-vis, companies in Texas, all carrying on under the same operation, where they can compete under the same terms and conditions.

MR. WHITE: It all depends on how much oil they have got.

MR. PATTILLO: Isn't it very different when you have the producers from Venezuela, who are not bothered with pro rationing, competing with the producers from Alberta? Is it not then almost impossible, unless a person from Alberta happens to have 95% of the production of the Province?

MR. WHITE: Mr. Pattillo, there isn't any question that 100% concession oil has a lot more economic sex appeal than 50% purchased oil. Actually, the difference lies more in the difference in the land system, because you will find, in Venezuela today, that the producing companies are voluntarily prorating themselves.

I had not really thought about introducing the early history of Alberta here, before Government pro rationing came into effect; but it might be useful for the Commission to hear about it. It is late tonight and, perhaps, tomorrow would be a better time, and we





would be glad to direct evidence towards that in the morning.

MR. PATTILLO: I think that would be a very good place for us to break, if we could start with that in the morning.

THE CHAIRMAN: I quite agree with you, and I can assure you that the Commission has great sympathy for the author of that article.

We shall now adjourn, gentlemen, until 10 o'clock tomorrow morning.

---Whereupon the hearing adjourned, at 4.30 p.m., until 10 a.m., Tuesday, May 6, 1958.













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